

2025-2026

**This booklet contains
tests for**

Art (grades 4-6)
Calculator Applications (grades 6-8)
Chess Puzzle (grades 2-8)
Creative Writing (grade 2)
Dictionary Skills (grades 5-6)
Listening Skills (grades 5-6)
Maps, Graphs & Charts (grades 5-6)
Mathematics (grades 6-8)
Number Sense (grades 4-6)
Ready Writing (grades 3-6)
Science (now grades 6-8)
Social Studies (grades 5-6)
Storytelling (grades 2-3)

**Duplicate materials as needed.
For contest rules, refer to the
A+ Handbook or UIL website.**

**ELEMENTARY ACADEMIC
STUDY MATERIALS BOOKLET**

www.uiltexas.org/aplus



UNIVERSITY INTERSCHOLASTIC LEAGUE

CONTESTANT NUMBER:

FOR GRADER USE ONLY

Score Test Below:

_____ out of 60. Initials _____

_____ out of 60. Initials _____

Papers contending to place:

_____ out of 60. Initials _____

**To calculate final score, add Part A and Part B together.*



**University Interscholastic League
A+ Art Contest Part A • Answer Sheet**

NOTE: Contestants are required to list only the artist's last name (as it appears on the Official List) for Part A. However, there is **no penalty** if contestants also list the artist's first name. Scoring is based on correctness of the artist's last name and the title of the work.

Write your contestant number in the upper right corner, and circle your grade below.

Circle Grade Level: 4 5 6 7 8

ARTIST

PAINTING

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

FOR GRADER USE ONLY

Score Test Below:

_____ out of 60. Initials _____

_____ out of 60. Initials _____

Papers contending to place:

_____ out of 60. Initials _____

To calculate final score, add Part A and Part B together.*University Interscholastic League
A+ Art Contest Part B • Answer Sheet***Write your contestant number in the upper right corner, and circle your grade below.***Circle Grade Level:****4 5 6 7 8****Art Elements & Principles**

1. A B C D
2. A B C D
3. A B C D
4. A B C D
5. A B C D
6. A B C D
7. A B C D
8. A B C D
9. A B C D
10. A B C D
11. True False
12. True False
13. True False
14. True False
15. True False

Art History

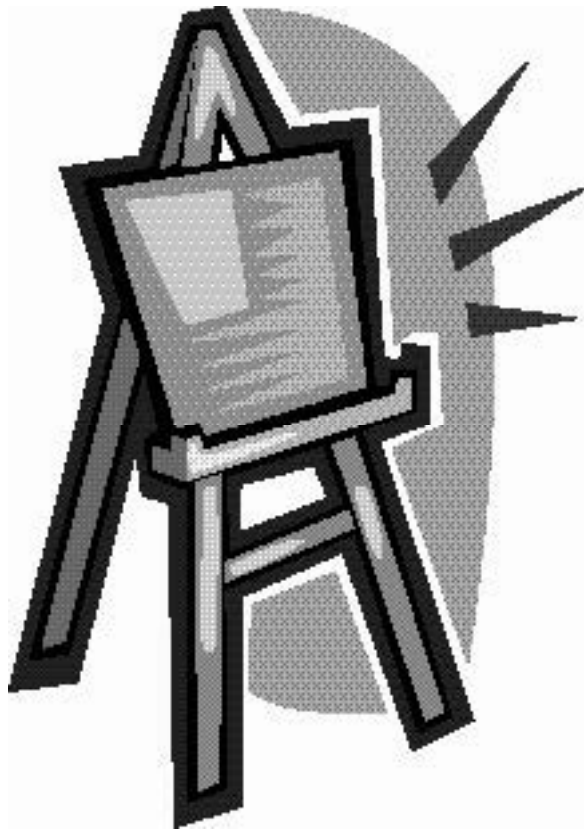
16. A B C D
17. A B C D
18. A B C D
19. A B C D
20. A B C D
21. A B C D
22. A B C D
23. A B C D
24. A B C D
25. A B C D
26. True False
27. True False
28. True False
29. True False
30. True False

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Art Contest

grades 4, 5, & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

2024-2025 Invitational Art Test Part B - Grades 4-6

Art Elements and Principles Section

1. What are complementary colors?
 - a. Colors that look good next to each other
 - b. Colors that evoke strong emotional reactions
 - c. Colors across from each other on the color wheel
 - d. Colors you can mix together to create secondary colors
2. Gray, black, and white are all examples of
 - a. Neutral colors
 - b. Primary colors
 - c. Secondary colors
 - d. Cool colors
3. Which of the following is a technique that uses high contrast between light and shadow to create a dramatic effect?
 - a. Cubism
 - b. Collage
 - c. Oil sketching
 - d. Chiaroscuro
4. Which type of painting uses art elements as the subject of the work?
 - a. Impressionist painting
 - b. Abstract painting
 - c. Fauvist painting
 - d. Contemporary painting
5. Pop Art is an art movement that draws inspiration from
 - a. Ancient Greek and Roman culture
 - b. The natural world
 - c. Advertisements, celebrities, and comic book heroes
 - d. Mathematics
6. What does the term "Surrealism," associated with Salvador Dalí, refer to?
 - a. The use of vibrant colors and bold brushstrokes to evoke emotions.
 - b. The creation of dreamlike, illogical worlds that explore the subconscious
 - c. The depiction of religious and spiritual themes through symbolic imagery
 - d. The breaking down of objects into geometric shapes
7. What is brushwork?
 - a. The way an artist uses their paintbrush to apply paint onto a surface
 - b. The amount of time it takes a painting to dry
 - c. The act of mixing two colors together to create a new color
 - d. A term used to describe the type of work completed by members of the Dutch painters' guilds
8. What technique would an artist use to make an object appear three-dimensional?
 - a. Tracing the object onto the canvas before painting
 - b. Using light and shadow to define its form
 - c. Outlining its shape with bold lines
 - d. Painting the object in complementary colors.

9. Which of the following refers to the repeated use of a visual element to create movement within a composition?
- Harmony
 - Balance
 - Perspective
 - Rhythm
10. Composition in a painting refers to
- the emotional tone conveyed by the color choices.
 - the symbolism associated with different visual elements.
 - the arrangement of elements within the artwork
 - a method of stretching the canvas over its frame.

True/False

11. Warm colors appear farther away, while cool colors appear closer to us.
12. Perspective is the illusion of depth or distance in a painting.
13. All paintings have the same texture throughout the entire surface.
14. An artist can use lines to define shapes and guide the viewer's eye.
15. The focal point of a painting is always located in the center of the canvas.

Art History Section

16. Why did the Catholic Church commission paintings like *Supper at Bethany* by Bernardino Butinone?
- To decorate the homes of the wealthiest members of the church
 - To remind their priests of their oaths to the faith
 - To help illiterate people understand Biblical stories
 - To ward off evil spirits
17. Why did mythological themes become popular during the Renaissance?
- The majority of Italian citizens worshiped the Roman gods during this period
 - There was a renewed interest in ancient Greek and Roman art and literature
 - Religious themes were banned
 - All of the above
18. Which of the following artists is associated with the Dutch Golden Age during the Baroque period?
- Leonardo da Vinci
 - Piet Mondrian
 - Pablo Picasso
 - Johannes Vermeer
19. What does the color red most likely symbolize in *Young Girl Plucking a Duck* by Barent Fabritius?
- Romantic love
 - Life and death
 - The blood of Christ
 - Celebration and festivity

20. Judith Leyster's *Self Portrait* serves as an advertisement for her skills in which types of painting?
- Landscape and impressionist
 - Portrait and genre painting
 - Abstract and still life
 - Religious and spiritual
21. *Bottle of Port and Glass* by Pablo Picasso is an example of
- Cubism
 - Still life
 - Modern Art
 - All of the above
22. How does Georgia O'Keeffe's *Red Cannas* encourage the viewer to see the world differently?
- By abstracting the flower, breaking it down into lines and shapes
 - By presenting the flower from an unusual, magnified point of view
 - By painting the flower in black and white to eliminate distractions
 - By using the Cubist technique of showing the flower from several different angles at once
23. What is unusual about the girl closest to the viewer in *Girls on the Pier* by Edvard Munch?
- She has no face
 - She is wearing a strange hat
 - She is holding a large lizard
 - She is unusually tall
24. What is depicted in *Street to Mbari*?
- A quiet rural town
 - A bustling market
 - A street parade
 - A dock full of boats
25. What does the train in *Tomorrow I May Be Far Away* by Romare Bearden most likely symbolize?
- The Great Migration and the Underground Railroad
 - The transportation of agricultural products along the Mississippi River
 - The influence of jazz music on society
 - The merging of European and American cultures

True/False

26. The Renaissance Period was influenced by the rise of Protestantism in Northern Europe, as well as the creation of artist guilds.
27. *New Road* by Grant Wood is an example of the American Regionalist movement, which sought to explore artists' emotions through the use of abstract compositions.
28. In *Conversation among the Ruins* by Giorgio De Chirico, the couple in the painting appears to be unaware of the desolate world outside their space.
29. Lee Krasner and her husband, Jackson Pollock, were pioneers of the Abstract Expressionist movement.
30. The three triangles in *Madonna and Child with St. Jerome* by Garofalo are considered symbols of the three wise men from the Nativity story.

2024-2025 Invitational Art Test- Grades 4-6

(Part B)

Answer Key

Art Elements and Principles

Art History

1. C	(12)	16.C	(23)
2. A	(29)	17.B	(37)
3. D	(42)	18.D	(48)
4. B	(26)	19.B	(47)
5. C	(18)	20.B	(45)
6. B	(62)	21.D	(54)
7. A	(11)	22.B	(58)
8. B	(12)	23.A	(51)
9. D	(34)	24.B	(65)
10.C	(12)	25.A	(66)
11.F	(17)	26.F	(36)
12.T	(17)	27.F	(60)
13.F	(32)	28.T	(59)
14.T	(30)	29.T	(64)
15.F	(13)	30.F	(40)

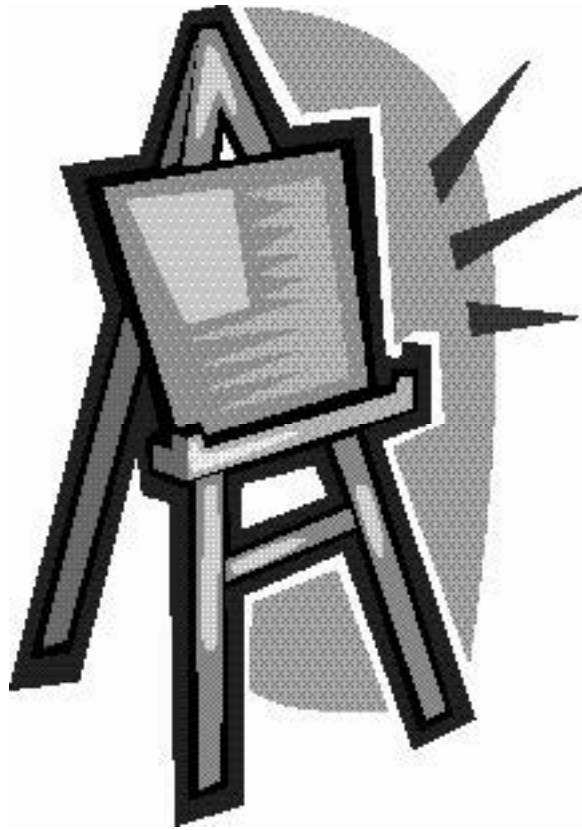
Numbers in parentheses are page numbers where answers can be found in the Art Smart Bulletin for 2023-2024 and 2024-2025.

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Art Contest

grades 4, 5, & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

2024-2025 Fall/Winter District Art Test Part B - Grades 4-6

Art Elements and Principles Section

1. What color is made by mixing blue and red?
 - a. Purple
 - b. Yellow
 - c. Orange
 - d. Pink
2. Green is an example of a
 - a. primary color
 - b. cool color
 - c. neutral color
 - d. warm color
3. Which of the following color palettes is most likely to create a calm and peaceful mood?
 - a. Bright, contrasting colors
 - b. Cool, soft colors like blues and greens
 - c. Warm, vibrant colors like reds and oranges
 - d. Dark, muted colors
4. What is one way to create depth in a painting using perspective?
 - a. By keeping all objects the same size
 - b. By making objects in the foreground larger
 - c. By making objects in the background larger
 - d. By painting the foreground at the top of the canvas and the background at the bottom
5. What is the main difference between shape and form?
 - a. Shape is two-dimensional, while form is three-dimensional.
 - b. Shape is always realistic, while form is always abstract.
 - c. Shape is always symmetrical, while form is always asymmetrical.
 - d. None of the above; form and shape are interchangeable.
6. The range of colors an artist uses in a painting is called the ____.
 - a. Oeuvre
 - b. Perspective
 - c. Palette
 - d. Mood
7. What is the primary focus of a landscape painting?
 - a. The contrast between natural and industrial elements in a scene
 - b. The natural scenery, such as mountains, rivers, and forests
 - c. The historical events taking place
 - d. The documentation of cultural practices and rituals in rural settings
8. Contrast can be achieved through the use of:
 - a. Warm and cool colors
 - b. Light and shadow
 - c. Rough and smooth textures
 - d. All of the above

9. The foreground of a painting:
 - a. Appears closest to the viewer
 - b. Is the background scenery
 - c. Is usually out of focus
 - d. Contains little to no detail
10. Silk screening allows artists to:
 - a. Blend colors seamlessly
 - b. Paint on large surfaces
 - c. Reproduce artworks over and over
 - d. Take their paint and canvases outside, to paint in the open air

True/False

11. A collage, like Bearden's *Tomorrow I May Be Far Away*, is a gigantic painting that is painted directly on a wall or ceiling.
12. Vertical lines are often associated with strength and order in a painting.
13. Texture in a painting refers only to the visual appearance, not the actual feel of the surface.
14. The point of view in a painting is the illusion of depth or distance.
15. Chiaroscuro means "light and dark" in Italian.

Art History Section

16. Which city is considered the birthplace of the Renaissance?
 - a. Bruges
 - b. Florence
 - c. Amsterdam
 - d. Rome
17. Why do some colors in *The Investiture of Saint Ildefonsus* by Juan de Borgoña remain vibrant while others have faded?
 - a. The use of different types of paints
 - b. The painting was never finished
 - c. The painting was badly restored
 - d. The artist's choice of canvas
18. What element of *Young Girl Plucking a Duck* highlights the contrast between life and death?
 - a. The bright red color of the girl's clothing and the somber grays and browns of the duck
 - b. The bright light shining on the duck and the shadow hiding the girl's face
 - c. The yellow, baby ducklings in the background and girl's serious expression
 - d. The bright red apples on the table and the dull gray knife in the girl's hand
19. Which of the following best describes the mood of *Woman Holding a Balance* by Vermeer?
 - a. Exciting
 - b. Contemplative
 - c. Terrifying
 - d. Suspenseful

20. What scene is depicted in Abraham van Beyerens's *Banquet Still Life with Roses*?
- The king of Holland hosting an elaborate banquet
 - The remains of a banquet after it has ended
 - A young woman in the kitchen preparing a meal for her family
 - The Greek god Dionysus engaged in a magnificent feast
21. Which of the following became popular during the Dutch Golden Age?
- Genre paintings and still life
 - Elaborate religious paintings that decorated the walls of churches
 - Sculptures of camels and other large African mammals
 - Paintings of celebrities and famous actors
22. Claude Monet is associated with which art movement?
- Cubism
 - Surrealism
 - Regionalism
 - Impressionism
23. How does Edward Hopper's *House with Fence* use composition to establish the painting's mood?
- The house is centered to maintain a sense of balance and orderliness
 - The cropped view gives a sense of isolation and confinement
 - The abundance of warm colors contribute to a comforting atmosphere
 - The composition does not affect the mood
24. Why did Matisse switch to collage later in his life?
- He preferred the vibrant colors.
 - Acrylic paint was temporarily banned in Europe.
 - Illness prevented him from painting.
 - He thought collage would be more environmentally friendly.
25. Why was Warhol's use of silk-screening in works like *Caroline* considered controversial?
- Because it made his art look too similar to traditional paintings
 - Because it was seen as a mechanical process that lacked the personal touch of the artist
 - Because it used materials that were expensive and hard to find
 - Because it avoided any connection to pop culture

True/False

26. Caravaggio is often credited with helping to transition art from the calm and balanced compositions of the Renaissance to the dynamic and dramatic style of the Baroque period.
27. Nancy Graves was a pioneer of the Pop Art movement.
28. The woman in Titian's *Woman Holding an Apple* has been identified as Cecilia Soldani, the artist's wife.
29. During the Contemporary period, New York City became a cultural center for artists.
30. Delfina, the subject of Diego Rivera's *Delfina Flores*, is a young Otomi girl who the artist painted several times throughout his life.

2024-2025 Fall/Winter District Art Test- Grades 4-6

(Part B)

Answer Key

Art Elements and Principles

Art History

1. A	(27)	16. B	(36)
2. B	(13)	17. A	(39)
3. B	(13)	18. A	(47)
4. B	(17)	19. B	(48)
5. A	(20)	20. B	(49)
6. C	(17)	21. A	(13)
7. B	(15)	22. D	(53)
8. D	(13)	23. B	(56)
9. A	(14)	24. C	(61)
10. C	(18)	25. B	(68)
11. F	(12)	26. T	(43)
12. T	(30)	27. F	(69)
13. F	(21)	28. F	(41)
14. F	(17)	29. T	(63)
15. T	(11)	30. T	(57)

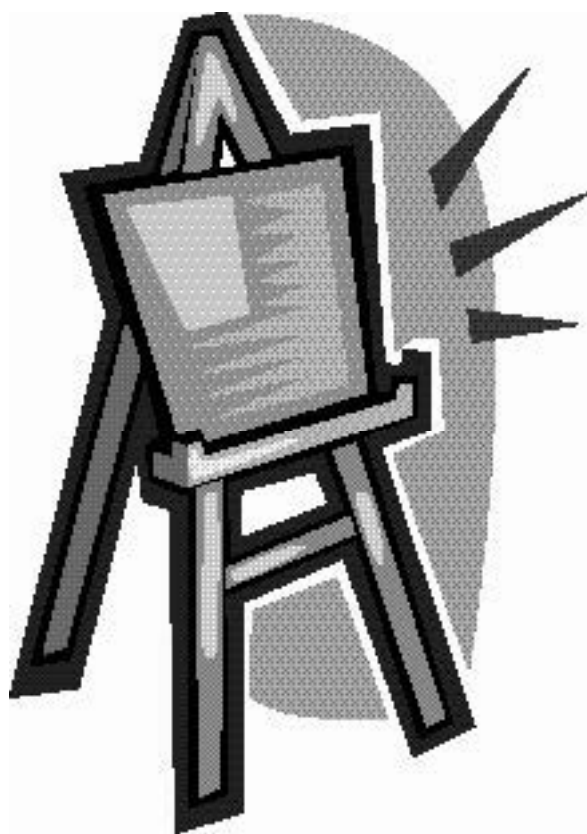
Numbers in parentheses are page numbers where answers can be found in the Art Smart Bulletin for 2023-2024 and 2024-2025.

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Art Contest

grades 4, 5, & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

2024-2025 Spring District Art Test Part B - Grades 4-6

Art Elements and Principles Section

1. What colors should you mix to create purple?
 - a. Blue and yellow
 - b. Red and blue
 - c. Green and red
 - d. Yellow and red
2. What was a common subject for Impressionist painters?
 - a. Outdoor scenes with natural light
 - b. Important historical events and battles
 - c. Scenes from Greek mythology
 - d. Religious and spiritual imagery
3. How does Cubism differ from traditional representational art?
 - a. It uses only primary colors and avoids secondary colors.
 - b. It flattens objects, representing them in only two dimensions.
 - c. It emphasizes texture and surface detail to a greater degree.
 - d. It uses multiple points of view in a single piece.
4. Lee Krasner's *Blue and Black* is an abstract piece because
 - a. it was created during the Contemporary period
 - b. Its patterns and colors are subjects in themselves
 - c. it includes a central figure surrounded by abstract shapes
 - d. it was influenced by Matisse, an abstract artist
5. Which of the following is NOT an example of a shape?
 - a. Triangle
 - b. Hexagon
 - c. Cube
 - d. Trapezoid
6. What effect does rhythm have on a viewer's experience of a painting?
 - a. It makes the colors in the painting appear more vibrant.
 - b. It helps guide the viewer's eye and creates a sense of movement.
 - c. It adds more texture to the surface of the painting.
 - d. It adds an auditory or musical element to the painting
7. Which type of line is most likely to suggest strength and stability in a painting?
 - a. Vertical
 - b. Zigzagged
 - c. Curved
 - d. Diagonal
8. Why might an artist include symbols in a painting?
 - a. To convey deeper meanings
 - b. To ensure that it has only one interpretation
 - c. To shift away from realism and toward abstraction
 - d. To create an illusion of depth

9. How does oil paint differ from other types of paint?
- a. It is brighter than other kinds of paint
 - b. It takes a longer time to dry
 - c. It is imported from Asia, making it more expensive
 - d. It is made by mixing colored powder with egg yolk
10. In *Holy Family with Saint Anne*, what technique did Luca Cambiaso use to create a dramatic effect?
- a. Impressionism
 - b. Chiaroscuro
 - c. Collage
 - d. All of the above

True/False

11. Red and yellow are complementary colors.
12. An artist's "oeuvre" refers only to their most famous painting.
13. White, black, gray, and beige are considered neutral colors; they have neither a warm nor a cool effect in a painting.
14. The "medium" of a painting refers solely to the type of surface the artist paints on.
15. In art, "composition" refers to the position or angle from which the viewer sees objects in a painting.

Art History Section

16. *Holy Family with Saint Anne* by Luca Cambiaso is an example of ____.
- a. Religious and spiritual painting
 - b. Renaissance painting
 - c. Oil painting
 - d. All of the above
17. Why did Caravaggio leave Rome in 1606?
- a. He was offered a great job in Naples.
 - b. He moved to Venice to study the work of Titian.
 - c. He killed a man and ran away from the police.
 - d. He gave up painting and became a shepherd in the Tuscan countryside.
18. In *Composition with Large Blue Plane, Red, Black, Yellow, Gray*, how does Piet Mondrian convey order and universal truth?
- a. Through the use of straight lines, primary colors, and geometric shapes
 - b. Through the use of intricate patterns and complementary colors
 - c. By splattering paint on the canvas at random
 - d. By blending colors to create a gradient effect, implying the interconnectivity of all things
19. Which of the following was a characteristic of Renaissance painting?
- a. The use of linear perspective to create depth
 - b. Abstraction and non-representational subjects
 - c. Fantastical and dream-like landscapes
 - d. Lack of detail and minimalist palettes

20. In Judith Leyster's *Self Portrait*, what is the artist doing?
- a. Holding an apple
 - b. Working on a genre painting
 - c. Playing a musical instrument
 - d. Sculpting a statue
21. Where did Georgia O'Keeffe find inspiration later in her life?
- a. In her luscious garden outside of Paris
 - b. In the ancient books of Greek philosophers
 - c. In the deserts of New Mexico
 - d. In rural American towns
22. In *Improvisation 31 (Sea Battle)* by Wassily Kandinsky, the colors are
- a. muted to create a sense of calm.
 - b. bright and clashing to evoke a sense of conflict and energy.
 - c. blended smoothly to make the work appear life-like.
 - d. complimentary, creating a feeling of harmony.
23. In *Sacrament of the Last Supper*, Salvador Dalí used ____ to create a ____.
- a. abstraction; landscape painting
 - b. symbolic objects; still life
 - c. chiaroscuro; a dramatic portrait
 - d. surrealist techniques; religious and spiritual painting
24. How does Alice Neel's depiction of Dorothy Pearlstein's eyes contribute to the overall impact of the portrait?
- a. The eyes are downcast, suggesting introspection and melancholy.
 - b. The eyes are polished and defiant, drawing the viewer's attention to the subject's strong character.
 - c. The eyes are hidden, leaving the viewer to focus on other aspects of the portrait.
 - d. The eyes are closed, emphasizing the subject's peaceful nature.
25. Why was Castiglione, the creator of *Noah Leading the Animals into The Ark*, not widely successful during his lifetime?
- a. He was a violent man and constantly in trouble with the law.
 - b. His painting techniques were far ahead of their time.
 - c. His brother took credit for his work.
 - d. He only painted pictures of animals, refusing commission work from the Catholic Church.

True/False

26. *Portrait of a Youth* by Sandro Botticelli is an example of a religious painting.
27. The small balance in *Woman Holding a Balance* by Johannes Vermeer acts as a symbol of justice and balance.
28. Baroque painting is typically characterized by its dramatic movement and intense lighting.
29. Abstract Expressionism, the Harlem Renaissance, and Pop Art were all movements that came out of the Contemporary period.
30. Nancy Graves used multiple canvases and abstract painting techniques to create *Untitled 1*.

2024-2025 Spring District Art Test- Grades 4-6

(Part B)

Answer Key

Art Elements and Principles

Art History

1. B	(27)	16.D	(42)
2. A	(14)	17.C	(43)
3. D	(13)	18.A	(55)
4. B	(64)	19.A	(36)
5. C	(20)	20.B	(45)
6. B	(34)	21.C	(58)
7. A	(34)	22.B	(52)
8. A	(20)	23.D	(62)
9. B	(21)	24.B	(67)
10.B	(42)	25.A	(46)
11.F	(12)	26.F	(37)
12.F	(16)	27.T	(48)
13.T	(16)	28.T	(44)
14.F	(15)	29.T	(63)
15.F	(12)	30.T	(69)

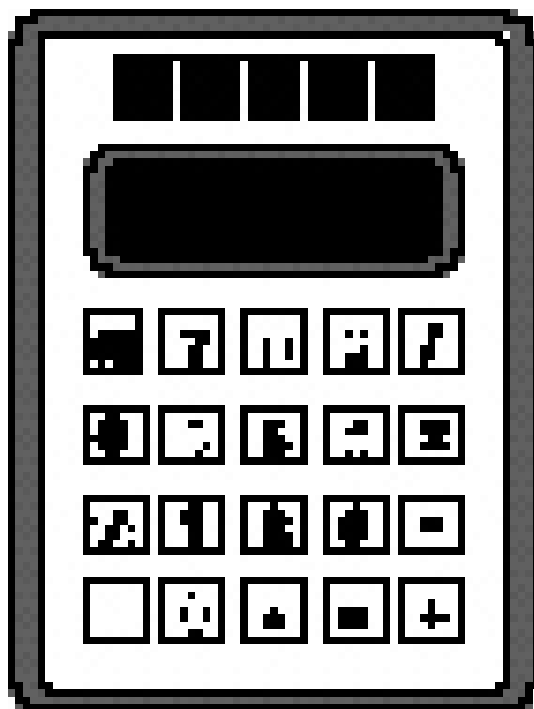
Numbers in parentheses are page numbers where answers can be found in the Art Smart Bulletin for 2023-2024 and 2024-2025.

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Calculator Applications

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

How to Write the Answers

A. For all problems except stated problems as noted below—write three significant digits.

1. Examples (* means correct but not recommended)

Correct: 12.3, 123, 123.*, 1.23x10*, 1.23x10⁰*,
1.23x10¹, 1.23x10⁰¹, .0190, 0.0190, 1.90x10⁻²

Incorrect: 12.30, 123.0, 1.23(10)², 1.23·10², 1.230x10²,
1.23*10², 0.19, 1.9x10⁻², 19.0x10⁻³, 1.90E-02,

answers written in parentheses(), brackets[] or braces{} are incorrect

2. Plus or minus one digit error in the third significant digit is permitted.

B. For stated problems

1. Except for integer and dollar sign problems, answers to stated problems should be written with three significant digits.

2. Integer problems are indicated by (integer) in the answer blank. Integer problems answers must be exact, no plus or minus one digit, no decimal point or scientific notation.

3. Dollar sign (\$) problems should be answered to the exact cent, but plus or minus one cent error is permitted. Answers must be in fixed notation. The decimal point and cents are required for exact-dollar answers.

2024 – 2025 UIL MS Calculator Test A

25X-1. $37.6 + 8.69$ ----- 1=_____

25X-2. $-33 - 52 - 26$ ----- 2=_____

25X-3. $-178 - 432 - 463$ ----- 3=_____

25X-4. $42 + 34 - 16 - \pi$ ----- 4=_____

25X-5. $469 - 680 - 1100 - 686$ ----- 5=_____

25X-6. $150 + 539 - 312 - 75.9 + 443$ ----- 6=_____

25X-7. $0.276 + \pi + 0.681 + 1.61 + 0.503$ ----- 7=_____

25X-8. $1.94 + 1.65 - 2.66 + 0.681 + 0.763$ ----- 8=_____

25X-9. $140 \times 136 \times 51.5$ ----- 9=_____

25X-10. $7960 \times 823 \times 201 \times 300$ ----- 10=_____

25X-11. What is the sum of 25.3, pi and 7.08?----- 11=_____

25X-12. The positive square root of forty-five thousand subtracted from three hundred seventeen yields what number? ----- 12=_____

25X-13. If Tom sells 128 cookies at 75¢ per cookie, how much money did Tom earn selling cookies? ----- 13=\$_____

25X-14. $238/[55 \times 204 \times 71]$ ----- 14=_____

25X-15. $(89)[184 \times 390 \times 438]$ ----- 15=_____

25X-16. $\{(141)(81 - 35)(180)\} - 9.08 \times 10^5$ ----- 16=_____

25X-17. $(214 + 141)[204 - 331 - 206]$ ----- 17=_____

25X-18. $\left[\frac{25}{52}\right] \left[\frac{90}{12}\right] \{312 + 438 - 301\}$ ----- 18=_____

25X-19. $\frac{[0.095/(0.0298)]/3.99}{(0.00158 \times 0.00117)(0.00171)}$ ----- 19=_____

25X-20. $\frac{(2.75 \times 10^{-4})(1.57 \times 10^{-4})}{3140} (\pi - 0.51)$ ----- 20=_____

25X-21. $\frac{0.0111 + 0.0479 + 0.0328}{(9.77 \times 10^{-5})(1100)(6.02 \times 10^6)}$ ----- 21=_____

25X-22. $\frac{(313 \times 371)/1490}{(300 \times 0.0434) + 3.54}$ ----- 22=_____

25X-23. $\left[\frac{666 + 1130}{696 - 611}\right] \left[\frac{1270}{256}\right]$ ----- 23=_____

25X-24. According to the U.S. Department of Transportation, the port of Laredo, Texas, handled 2,936,130 incoming trucks in 2023. On average, how many incoming trucks entered the United States via the port of Laredo daily?----- 24=_____ trucks

t5X-25. First class forever postage stamps cost 73¢ each. What is the greatest number of these stamps one can buy for \$20? ----- 25=_____ stamps(integer)

25X-26. The cheapest ticket for the July 9th Taylor Swift "Eras Tour" concert in Zurich, Switzerland was listed at \$645 on Vivid Seats. If the concert lasted 3 hours and 22 minutes, how much did one minute of the concert cost?----- 26=\$_____

25X-27. $[2630 - (4220 + 3430)] + [(0.822)(1820 - 5110)]$ ----- 27=_____

25X-28. $\frac{(3.97 \times 10^{10}) + (6.40 \times 10^{10})}{(-0.107)(0.0731) - 0.00594}$ ----- 28=_____

25X-29. $\frac{(0.134 - 0.0928)(17.1 + 8.27)}{(1.10 \times 10^{11})}$ ----- 29=_____

25X-30. $\frac{(0.00718 + 0.00245)}{(4.22 \times 10^{12})}$ ----- 30=_____

25X-31. $\frac{1}{-5310} + \frac{1}{(\pi)(351 - 2090)}$ ----- 31=_____

25X-32. $[0.216] \left[\frac{1/9.41 \times 10^{-4}}{1/0.00169} \right]$ ----- 32=_____

25X-33. $\frac{1}{731} - \frac{1}{(797 + 303)}$ ----- 33=_____

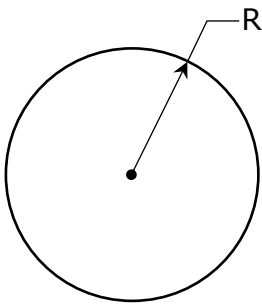
25X-34. $\left[\frac{1/172}{1/48} \right] + [0.782]$ ----- 34=_____

25X-35. On one of the TxDot highway marquees, I noticed that it stated that the next town was 13 miles and 12 minutes. What average speed, in miles per hour (mph), would I need to be driving to accomplish that feat? ----- 35=_____ mph

25X-36. One day, I noticed that a yardstick cast a shadow that was 8" long. If a nearby pole cast a shadow that measured 3' 6" long, how tall is the pole? ----- 36=_____ feet

25X-37.

CIRCLE

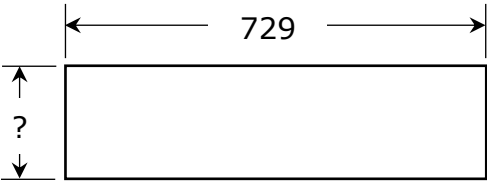


Circumference = ?

25X-37=_____

25X-38.

RECTANGLE



Area = 183000

25X-38=_____

25X-40. $(21 + 34 + 29.5)^2(59.9 + 43)^2$ ----- 40=_____

25X-41. $\sqrt{\frac{6.48 + 26.4}{19.7 - 16.4}}$ ----- 41=_____

25X-42. $\sqrt{(17.7/42) + 0.146 - 0.0499}$ ----- 42=_____

25X-43. $(1/(0.0235))(5.17 \times 10^5 - 1.97 \times 10^5)^2$ ----- 43= _____

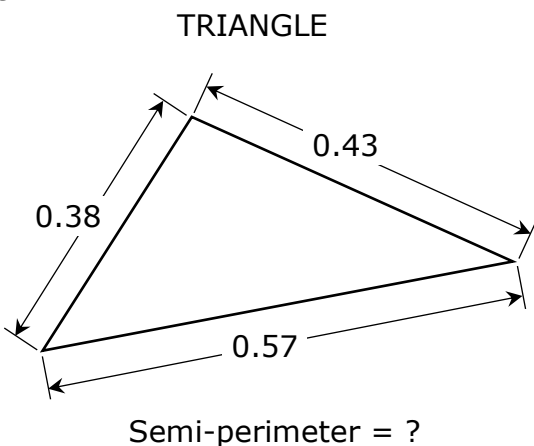
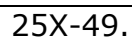
25X-44. $(17100)\sqrt{38500 + 20700 + 39200}$ ----- 44=

25X-45. $\sqrt{10.6 - 722/167} + 1/\sqrt{0.0174 + 0.0237}$ ----- 45=

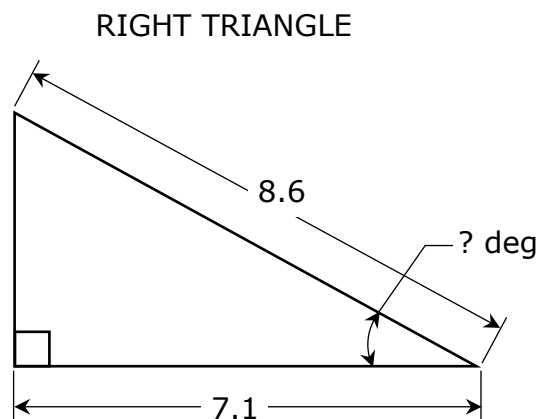
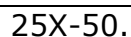
25X-46. $(468)\sqrt{3480 + 4790 - 4300}$ ----- 46=

25X-47. Matt walked 45 yards directly north, stopped and turned due west to walk 60 yards. What is the shortest distance back to his starting point? ----- 47= ft

25X-48. A rope was attached to the top of a 25' flagpole and stretched taut so that the other end of the rope just reached the ground 18' from the base of the flagpole. What angle did the taut rope make with the level ground?----- 48= deg



$25x - 49 =$



$$25X - 50 = \quad \text{deg}$$

$$25X-51. \quad \left[\frac{\sqrt{\sqrt{0.0134 - 0.0112}}}{-(0.0216 - 0.0107)} \right]^2 [2820 + 2470] \text{ ----- } 51 = \underline{\hspace{2cm}}$$

$$25X-52. \quad \frac{(10800 + 1650 - 13600)^3}{\sqrt{0.139 + 0.112 + 0.173}} \text{ ----- } 52 = \underline{\hspace{2cm}}$$

$$25X-53. \quad \left[\frac{14.2 + 12 + \sqrt{206 + 213}}{25.7/53.9} \right]^3 \text{ ----- } 53 = \underline{\hspace{2cm}}$$

$$25X-54. \quad (18.6)(6.96 \times 10^9)^{1/3} - [(6.77 \times 10^8)(2.29 \times 10^9)]^{1/4} \text{ ----- } 54 = \underline{\hspace{2cm}}$$

$$25X-55. \quad 19200 + \sqrt{(5110)(21200)} - (7160 + 12400) \text{ ----- } 55 = \underline{\hspace{2cm}}$$

$$25X-56. \quad \sqrt{\frac{1/(8.84 - 5.22)}{(30.1)(46.1 + 54.8)^5}} \text{ ----- } 56 = \underline{\hspace{2cm}}$$

$$25X-57. \quad \sqrt{\frac{1/(52.7 - 21.4)}{(2160)(932 + 1330)^{-2}}} \text{ ----- } 57 = \underline{\hspace{2cm}}$$

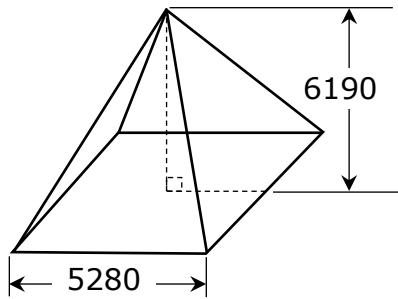
$$25X-58. \quad \sqrt{\frac{(30.7)(594)}{(681) + (1450)}} - 4.07 \text{ ----- } 58 = \underline{\hspace{2cm}}$$

25X-59. Researchers at the University of California San Diego School of Medicine recently created a formula to convert a dog's age, in years, to a human age, in years. The formula involves multiplying the natural logarithm of the dog's age by 16 and adding 31. Using this formula, what is the human age equivalent for Lady, our 14-year-old Labrador dog?----- 59=_____ years

25X-60. What is the percent error in using 3 for the number pi? ---- 60=_____ %

25X-61.

SQUARE PYRAMID

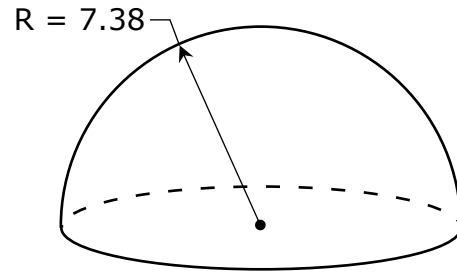


Volume = ?

25X-61= _____

25X-62.

HEMISPHERE



Volume = ?

25X-62= _____

25X-63. $\frac{28!/22!}{20! + 22!}$ ----- 63= _____

25X-64. (deg) $(1110 + 783)\cos(51.9^\circ)$ ----- 64= _____

25X-65. $(40400 - 76400)^{-10}(1.70 \times 10^6)$ ----- 65= _____

25X-66. (deg) $\tan(0.255^\circ - 0.351^\circ) + 0.00151$ ----- 66= _____

25X-67. (rad) $\cos\left[\frac{(1.46)(\pi)}{(1.5)(119)}\right]$ ----- 67= _____

25X-68. (rad) $(1650)\sin(28)$ ----- 68= _____

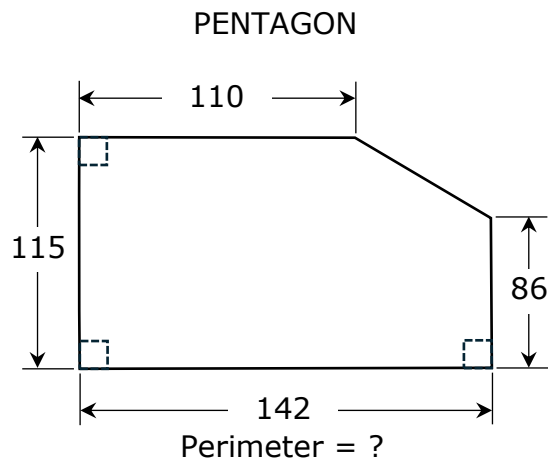
25X-69. (deg) $\frac{\tan(19.5^\circ)}{5850 + 2370}$ ----- 69= _____

25X-70. $(50.2 + 71.6 + 367)^{2/5}$ ----- 70= _____

25X-71. A 15 Lb. bag of cat food has bits of food that measure 10 bits of food per gram. If there are about 453.592 grams per pound, how many bits of cat food are in the bag? ----- 71= _____ bits

25X-72. On June 30, 1994, the hottest recorded temperature in Texas was recorded in Monahans. If this temperature was listed as 48.9 °C, what is this temperature in degrees Fahrenheit (°F)? ----- 72= _____ °F

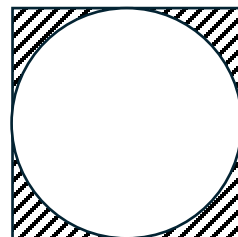
25X-73.



25X-73=_____

25X-74.

SQUARE AND CIRCLE



Perimeter of square = 1000

Hatched area = ?

25X-74=_____

25X-75. $\frac{\text{Log}(1990 + 1990)}{47200 - 28900}$ ----- 75=_____

25X-76. $\text{Ln}\left[\frac{92 + 116 + 32.9}{55.2 + 132 - 70}\right]$ ----- 76=_____

25X-77. $(22400)10^{(0.379)(6.45)}$ ----- 77=_____

25X-78. $\text{Ln}\left[\frac{8.3 + 21.2 + 6.33}{629 - 82.8 - 228}\right]$ ----- 78=_____

25X-79. $1 + 3 + 5 + \dots + 697$ ----- 79=_____

25X-80. $(0.409) - \frac{(0.409)^2}{2} + \frac{(0.409)^3}{3} - \frac{(0.409)^4}{4}$ ----- 80=_____

2024 – 2025 UIL MS Calculator Test A Answer Key

25X-1	= 46.3 = 4.63×10^1	25X-14	= 0.000299 = 2.99×10^{-4}	25X-27	= -7720 = -7.72×10^3
25X-2	= -111 = -1.11×10^2	25X-15	= 2.80×10^9	25X-28	= -7.54×10^{12}
25X-3	= -1070 = -1.07×10^3	25X-16	= 259000 = 2.59×10^5	25X-29	= 9.50×10^{-12}
25X-4	= 56.9 = 5.69×10^1	25X-17	= -118000 = -1.18×10^5	25X-30	= 2.28×10^{-15}
25X-5	= -2000 = -2.00×10^3	25X-18	= 28.8 = 2.88×10^1	25X-31	= -0.000371 = -3.71×10^{-4}
25X-6	= 744 = 7.44×10^2	25X-19	= 2.53×10^8	25X-32	= 0.388 = 3.88×10^{-1}
25X-7	= 6.21 = 6.21×10^0	25X-20	= 3.62×10^{-11}	25X-33	= 0.000459 = 4.59×10^{-4}
25X-8	= 2.37 = 2.37×10^0	25X-21	= 1.42×10^{-7}	25X-34	= 1.06 = 1.06×10^0
25X-9	= 981000 = 9.81×10^5	25X-22	= 4.71 = 4.71×10^0	25X-35	= 65.0 = 6.50×10^1
25X-10	= 3.95×10^{11}	25X-23	= 105 = 1.05×10^2	25X-36	= 15.8 = 1.58×10^1
25X-11	= 35.5 = 3.55×10^1	25X-24	= 8040 = 8.04×10^3	25X-37	= 4.28 = 4.28×10^0
25X-12	= 105 = 1.05×10^2	25X-25	= 27 Integer Answer	25X-38	= 251 = 2.51×10^2
25X-13	= 96.00 Dollar Answer	25X-26	= 3.19 Dollar Answer		

2024 – 2025 UIL MS Calculator Test A Answer Key

$$25X-39 = 3.29 \times 10^6$$

$$25X-40 = 7.56 \times 10^7$$

$$25X-41 = 3.16$$

$$= 3.16 \times 10^0$$

$$25X-42 = 0.719$$

$$= 7.19 \times 10^{-1}$$

$$25X-43 = 4.36 \times 10^{12}$$

$$25X-44 = 5.36 \times 10^6$$

$$25X-45 = 7.44$$

$$= 7.44 \times 10^0$$

$$25X-46 = 29500$$

$$= 2.95 \times 10^4$$

$$25X-47 = 225$$

$$= 2.25 \times 10^2$$

$$25X-48 = 54.2$$

$$= 5.42 \times 10^1$$

$$25X-49 = 0.690$$

$$= 6.90 \times 10^{-1}$$

$$25X-50 = 34.4$$

$$= 3.44 \times 10^1$$

$$25X-51 = 2.09 \times 10^6$$

$$25X-52 = -2.34 \times 10^9$$

$$25X-53 = 938000$$

$$= 9.38 \times 10^5$$

$$25X-54 = 226$$

$$= 2.26 \times 10^2$$

$$25X-55 = 10000$$

$$= 1.00 \times 10^4$$

$$25X-56 = 9.37 \times 10^{-7}$$

$$25X-57 = 8.70$$

$$= 8.70 \times 10^0$$

$$25X-58 = -1.14$$

$$= -1.14 \times 10^0$$

$$25X-59 = 73.2$$

$$= 7.32 \times 10^1$$

$$25X-60 = -4.51$$

$$= -4.51 \times 10^0$$

$$25X-61 = 5.75 \times 10^{10}$$

$$25X-62 = 842$$

$$= 8.42 \times 10^2$$

$$25X-63 = 2.41 \times 10^{-13}$$

$$25X-64 = 1170$$

$$= 1.17 \times 10^3$$

$$25X-65 = 4.65 \times 10^{-40}$$

$$25X-66 = -0.000166$$

$$= -1.66 \times 10^{-4}$$

$$25X-67 = 1.00$$

$$= 1.00 \times 10^0$$

$$25X-68 = 447$$

$$= 4.47 \times 10^2$$

$$25X-69 = 4.31 \times 10^{-5}$$

$$25X-70 = 11.9$$

$$= 1.19 \times 10^1$$

$$25X-71 = 68000$$

$$= 6.80 \times 10^4$$

$$25X-72 = 120$$

$$= 1.20 \times 10^2$$

$$25X-73 = 496$$

$$= 4.96 \times 10^2$$

$$25X-74 = 13400$$

$$= 1.34 \times 10^4$$

$$25X-75 = 0.000197$$

$$= 1.97 \times 10^{-4}$$

$$25X-76 = 0.721$$

$$= 7.21 \times 10^{-1}$$

$$25X-77 = 6.23 \times 10^6$$

$$25X-78 = -2.18$$

$$= -2.18 \times 10^0$$

$$25X-79 = 122000$$

$$= 1.22 \times 10^5$$

$$25X-80 = 0.341$$

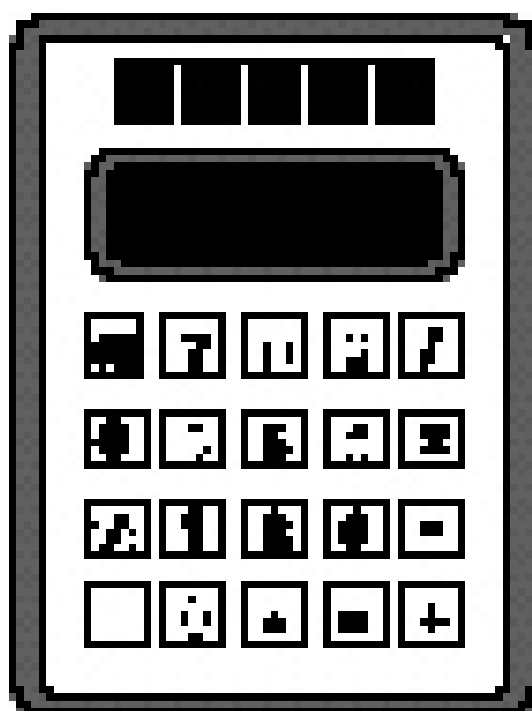
$$= 3.41 \times 10^{-1}$$

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Calculator Applications

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

How to Write the Answers

A. For all problems except stated problems as noted below—write three significant digits.

1. Examples (* means correct but not recommended)

Correct: 12.3, 123, 123.*, 1.23x10*, 1.23x10⁰*,
1.23x10¹, 1.23x10⁰¹, .0190, 0.0190, 1.90x10⁻²

Incorrect: 12.30, 123.0, 1.23(10)², 1.23·10², 1.230x10²,
1.23*10², 0.19, 1.9x10⁻², 19.0x10⁻³, 1.90E-02,

answers written in parentheses(), brackets[] or braces{} are incorrect

2. Plus or minus one digit error in the third significant digit is permitted.

B. For stated problems

1. Except for integer and dollar sign problems, answers to stated problems should be written with three significant digits.

2. Integer problems are indicated by (integer) in the answer blank. Integer problems answers must be exact, no plus or minus one digit, no decimal point or scientific notation.

3. Dollar sign (\$) problems should be answered to the exact cent, but plus or minus one cent error is permitted. Answers must be in fixed notation. The decimal point and cents are required for exact-dollar answers.

2024 – 2025 UIL MS Calculator Test B

25Y-1. $26.9 + 29.1$ ----- 1=_____

25Y-2. $56 - 8 + 53$ ----- 2=_____

25Y-3. $60 + 139 + 90$ ----- 3=_____

25Y-4. $50 + 10 - 51 - 50$ ----- 4=_____

25Y-5. $-2070 - 2020 - 5280 + 4040$ ----- 5=_____

25Y-6. $562 + 303 - 326 - 69.3 - 253$ ----- 6=_____

25Y-7. $(4.36 - 2.96) + (3.59 - 2.37 - 0.824)$ ----- 7=_____

25Y-8. $-6.9 - 1.71 + \pi - 1.67 - 1.34$ ----- 8=_____

25Y-9. $399 \times 201 \times 133$ ----- 9=_____

25Y-10. $155 \times 133 \times 338 \times 162$ ----- 10=_____

25Y-11. What is sum of ninety-one point seven, fourteen and two-thirds and three pi? ----- 11=_____

25Y-12. If the University Interscholastic League (UIL) was founded on May 3, 1913, how old is the UIL in November 2024? ----- 12=_____ yrs(integer)

25Y-13. To replace the blade on my lawn mower, I was told it would cost me \$72.88. If the labor cost for blade replacement is \$45.50, how much did the new blade cost?----- 13=\$_____

25Y-14. $732/[790 \times 844 \times 661]$ ----- 14=_____

25Y-15. $(781/753)[275 - 513]$ ----- 15=_____

25Y-16. $\left[\frac{-437}{697}\right][(127/92) - 1.19]$ ----- 16=_____

25Y-17. $(16 + 90)[94 - 36 - 35]$ ----- 17=_____

25Y-18. $\left[\frac{(5960/1380) - (5620/3030)}{136/28.9}\right]$ ----- 18=_____

25Y-19. $\left[\frac{57/69}{45/15}\right]\{1.21 + 0.994 - 1.97\}$ ----- 19=_____

25Y-20. $(12.8)[32/42 \times 122/191] - 3.55$ ----- 20=_____

25Y-21. $\frac{(\pi)(7/2)(10/10)}{88}$ ----- 21=_____

25Y-22. $\frac{(1130 + 3100 - 2440)}{\{(5.59 - \pi)/(40.8)\}}$ ----- 22=_____

25Y-23. $\frac{(\pi)(105/54)(29/152)}{(52/123)}$ ----- 23=_____

25Y-24. Mike charges \$85/hr for his work as an electrician. If a customer needs \$339.99 worth of equipment installed and it takes Mike 4.25 hours to complete the installation, how much does Mike charge the customer? Note that an 8½% sales tax on the equipment only is included in the total charge. ----- 24=\$_____

25Y-25. Maria and her two girlfriends decided to go to an outdoor concert in July. The concert tickets were \$15.75 each, the nachos for each girl cost \$7.50 each, and the soft drinks cost each girl cost \$4.75 each. If the girls took public transportation to the concert, and it cost \$3.50 each roundtrip, what was the total cost for all the girls to go to the concert? 25=\$_____

25Y-26. Li drove 8.6 miles to his favorite gas station and filled up his car's gas tank. He then drove 63.9 miles to see his brother. He then drove 109 miles to visit his sister. Li then drove back home on the exact same route. The next day, he drove back to the same gas station where he filled up his car earlier and put in 12.135 gallons of fuel. What is his car's miles per gallon (mpg) usage? ----- 26=_____ mpg

25Y-27. $\frac{(136 - 116)(0.0395 + 0.0235)}{(2.95 \times 10^{11})}$ ----- 27=_____

25Y-28. $[3310 - (3050 + 4370)] + [(0.33)(900 - 3420)]$ ----- 28=_____

25Y-29. $(2.25)[(0.0469/0.0142)(77.5 + 107)]$ ----- 29=_____

25Y-30. $\frac{(18.8 + 31.7)}{(1.71 \times 10^{11})}$ ----- 30=_____

25Y-31. $(22.9)\left[\frac{0.0688}{(9.97 \times 10^{10})}\right]$ ----- 31=_____

25Y-32. $[917]\left[\frac{1/0.0335}{1/0.0129}\right]$ ----- 32=_____

25Y-33. $\left[\frac{1/131}{1/108}\right][1.84 \times 10^6]$ ----- 33=_____

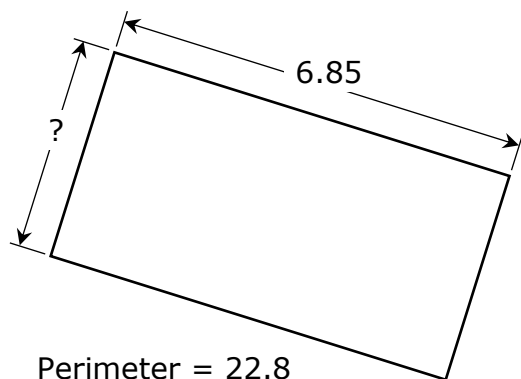
25Y-34. $\frac{1}{4870} - \frac{1}{4370} + \frac{1}{4940}$ ----- 34=_____

25Y-35. A measuring cup placed underneath a leaky faucet collected 2.25 ounces of water in $1\frac{3}{4}$ hours. At this rate, how long will it take the leaky faucet to leak 5 gallons of water? ----- 35=_____ hrs

25Y-36. On one of the TxDot highway marquees, I noticed that it stated that the next town was 15 miles and 17 minutes. What average speed, in miles per hour (mph), would I need to be driving to accomplish that feat? ----- 36=_____ mph

25Y-37.

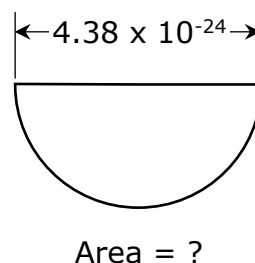
RECTANGLE



25Y-37=_____

25Y-38.

SEMICIRCLE



25Y-38=_____

25Y-39. $(1.29 + 1.11)^2(223 + 133)^2$ ----- 39=_____

25Y-40. $(0.395 + 0.814 + 0.748)^2(0.0921 + 0.132)^2$ ----- 40=_____

25Y-41. $\left[\frac{30900 + (1/(5.58 \times 10^{-5}))}{(15500/17700) - 0.109}\right]^2$ ----- 41=_____

25Y-42. $(1/(0.0316))(1260 - 769)^2$ ----- 42=_____

25Y-43. $\sqrt{(100/127) + 0.677 - 0.0952}$ ----- 43=_____

25Y-44. $(123)\sqrt{324 + 566 + 606}$ ----- 44=_____

25Y-45. $(3050)\sqrt{128 + 89 - 45.7}$ ----- 45=_____

25Y-46. $\left[4\sqrt{(0.915/1.12)(17.1)}\right]^3$ ----- 46=_____

25Y-47. A twenty-foot-long pole, on level ground, leaned against a building. If the top of the pole reached sixteen feet above the ground, what angle did the ladder make with the building? ----- 47=_____deg

25Y-48. The minute-hand of an analog clock is 5.75" long while the hour-hand is 3.28" long. At exactly 3 o'clock, what is the shortest distance between the end-tips of the clock hands? ----- 48=_____ "

25Y-49.

TRIANGLE

Area = ?

25Y-49= _____

25Y-50.

RIGHT TRIANGLE

25Y-50= _____deg

$$25Y-51. \left[\frac{483 - 142 + \sqrt{4.51 \times 10^5 / 4.56}}{-844 + 1450} \right]^2 \text{ ----- } 51 = \underline{\hspace{2cm}}$$

$$25Y-52. \frac{\sqrt{16.5 + \pi + 13.2}}{(302 - 719 + 321)^4} \text{ ----- } 52 = \underline{\hspace{2cm}}$$

$$25Y-53. \sqrt{\frac{0.0353}{(8.22)(48.5)}} + \frac{(1.57 - 1.39)}{(11.7 + 6.28)} \text{ ----- } 53 = \underline{\hspace{2cm}}$$

$$25Y-54. (8.8)^2 \sqrt{(45.1)/(1.93)} - (295 + 176) \text{ ----- } 54 = \underline{\hspace{2cm}}$$

$$25Y-55. \sqrt{\frac{1/(12.6 - 10)}{(31.6)(38.9 + 4.43)^3}} \text{ ----- } 55 = \underline{\hspace{2cm}}$$

$$25Y-56. \sqrt{\frac{(1.89 \times 10^5)(6230)}{(7160)(16300)}} - 1.91 + 1.49 \text{ ----- } 56 = \underline{\hspace{2cm}}$$

$$25Y-57. \sqrt{\frac{(71.9)(3450)}{(20.3) + (29.6)}} - 121 \text{ ----- } 57 = \underline{\hspace{2cm}}$$

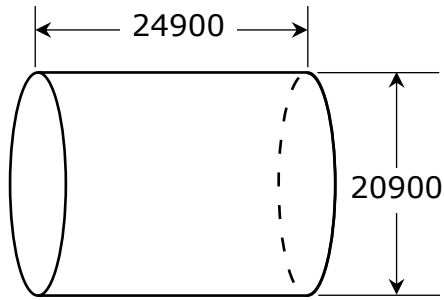
$$25Y-58. (\text{rad}) \tan(5.19) + (3.28/12.7) \text{ ----- } 58 = \underline{\hspace{2cm}}$$

25Y-59. Between 2021 and 2022 the city of Frisco, Texas grew from 193,140 to 202,075. What percent increase did this represent? ----- 59 = %

25Y-60. According to an article from the Animal Health Foundation, a formula to convert a cat's age, in years, to a human age, in years, involves using 15 human-years to represent the cat's first year of life, then adding 10 human-years to represent the second year of the cat's life and then adding 4 human-years for every year of the cat's life after that. According to this formula, what is the human age equivalent for Daisy, our 18-year-old cat? ----- 60 = years

25Y-61.

RIGHT CIRCULAR CYLINDER

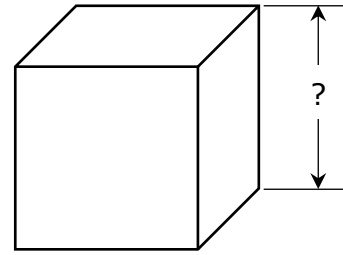


Volume = ?

25Y-61= _____

25Y-62.

SOLID CUBE



Total Surface Area = 0.0000825

25Y-62= _____

25Y-63. $\frac{17! - 19!}{16!}$ ----- 63= _____

25Y-64. (deg) $(18.3 - 35.1)\tan(18^\circ)$ ----- 64= _____

25Y-65. (deg) $\frac{\tan(42^\circ)}{548}$ ----- 65= _____

25Y-66. (rad) $\cos\left[\frac{(17.1)(\pi)}{(125)(2.82)}\right]$ ----- 66= _____

25Y-67. (deg) $\sin(240^\circ - 229^\circ) + 0.07$ ----- 67= _____

25Y-68. (deg) $\frac{\cos(230^\circ)}{0.944 + 0.218}$ ----- 68= _____

25Y-69. (rad) $\cos[(30.5 - 43.4)(5.92)]$ ----- 69= _____

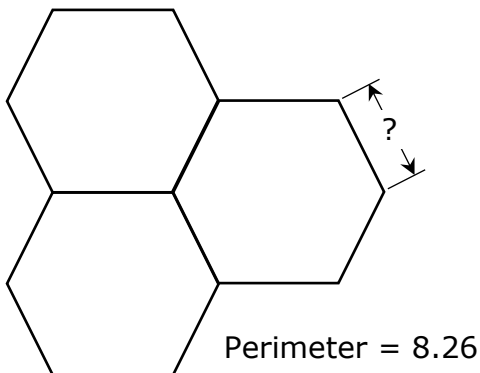
25Y-70. $(232 - 69.7)^{0.0338 - 0.0205}$ ----- 70= _____

25Y-71. On February 12, 1899, the coldest recorded temperature in Texas was recorded in Tulia. If this temperature was listed as -30.6°C , what is this temperature in degrees Fahrenheit ($^\circ\text{F}$)?----- 71= _____ $^\circ\text{F}$

25Y-72. A 15 Lb. bag of cat food that costs \$52.99 has bits of cat food that measure 10 bits of food per gram. If there are about 453.592 grams per pound, how much did each bit of cat food cost?----- 72= _____ ¢

25Y-73.

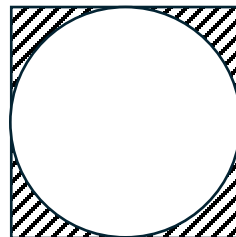
IDENTICAL REGULAR HEXAGONS



25Y-73= _____

25Y-74.

SQUARE AND CIRCLE



Area of Circle = 1000

Hatched area = ?

25Y-74= _____

25Y-75. $\frac{\text{Log}(1.56 \times 10^6 + 4.88 \times 10^6)}{0.762}$ ----- 75= _____

25Y-76. $\frac{\text{Log}(27.4 + 46)}{1050 - 314}$ ----- 76= _____

25Y-77. $\frac{4650 - 7400}{\text{Log}(77.6 + 477)}$ ----- 77= _____

25Y-78. $\frac{\text{Log}[376 + (\pi)(600)]}{0.342 + \text{Log}[0.761 + 1.88]}$ ----- 78= _____

25Y-79. $1 + 2 + 3 + \dots + 421$ ----- 79= _____

25Y-80. $-\frac{1}{(8.69)} + \frac{1}{3(8.69)^3} - \frac{1}{5(8.69)^5} + \frac{1}{7(8.69)^7}$ ----- 80= _____

2024 – 2025 UIL MS Calculator Test B Answer Key

25Y-1	= 56.0 = 5.60×10^1	25Y-14	= 1.66×10^{-6}	25Y-27	= 4.27×10^{-12}
25Y-2	= 101 = 1.01×10^2	25Y-15	= -247 = -2.47×10^2	25Y-28	= -4940 = -4.94×10^3
25Y-3	= 289 = 2.89×10^2	25Y-16	= -0.119 = -1.19×10^{-1}	25Y-29	= 1370 = 1.37×10^3
25Y-4	= -41.0 = -4.10×10^1	25Y-17	= 2440 = 2.44×10^3	25Y-30	= 2.95×10^{-10}
25Y-5	= -5330 = -5.33×10^3	25Y-18	= 0.524 = 5.24×10^{-1}	25Y-31	= 1.58×10^{-11}
25Y-6	= 217 = 2.17×10^2	25Y-19	= 0.0644 = 6.44×10^{-2}	25Y-32	= 353 = 3.53×10^2
25Y-7	= 1.80 = 1.80×10^0	25Y-20	= 2.68 = 2.68×10^0	25Y-33	= 1.52×10^6
25Y-8	= -8.48 = -8.48×10^0	25Y-21	= 0.125 = 1.25×10^{-1}	25Y-34	= 0.000179 = 1.79×10^{-4}
25Y-9	= 1.07×10^7	25Y-22	= 29800 = 2.98×10^4	25Y-35	= 498 = 4.98×10^2
25Y-10	= 1.13×10^9	25Y-23	= 2.76 = 2.76×10^0	25Y-36	= 52.9 = 5.29×10^1
25Y-11	= 116 = 1.16×10^2	25Y-24	= 730.14 Dollar Answer	25Y-37	= 4.55 = 4.55×10^0
25Y-12	= 111 Integer Answer	25Y-25	= 94.50 Dollar Answer	25Y-38	= 7.53×10^{-48}
25Y-13	= 27.38 Dollar Answer	25Y-26	= 29.2 = 2.92×10^1		

2024 – 2025 UIL MS Calculator Test B Answer Key

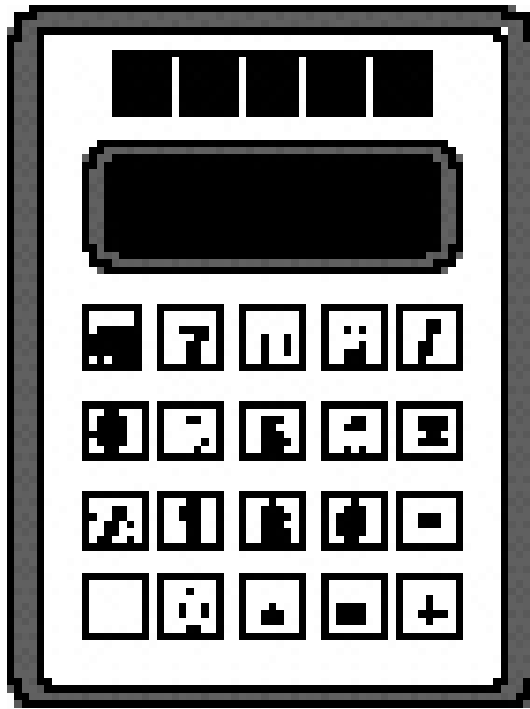
25Y-39	= 730000 = 7.30×10^5	25Y-51	= 1.17 = 1.17×10^0	25Y-61	= 8.54×10^{12}	25Y-73	= 0.688 = 6.88×10^{-1}
25Y-40	= 0.192 = 1.92×10^{-1}	25Y-52	= 6.75×10^{-8}	25Y-62	= 0.00371 = 3.71×10^{-3}	25Y-74	= 273 = 2.73×10^2
25Y-41	= 4.05×10^9	25Y-53	= 0.0194 = 1.94×10^{-2}	25Y-63	= -5800 = -5.80×10^3	25Y-75	= 8.94 = 8.94×10^0
25Y-42	= 7.63×10^6	25Y-54	= -96.7 = -9.67×10^1	25Y-64	= -5.46 = -5.46×10^0	25Y-76	= 0.00253 = 2.53×10^{-3}
25Y-43	= 1.17 = 1.17×10^0	25Y-55	= 0.000387 = 3.87×10^{-4}	25Y-65	= 0.00164 = 1.64×10^{-3}	25Y-77	= -1000 = -1.00×10^3
25Y-44	= 4760 = 4.76×10^3	25Y-56	= 2.76 = 2.76×10^0	25Y-66	= 0.988 = 9.88×10^{-1}	25Y-78	= 4.39 = 4.39×10^0
25Y-45	= 39900 = 3.99×10^4	25Y-57	= -50.5 = -5.05×10^1	25Y-67	= 0.261 = 2.61×10^{-1}	25Y-79	= 88800 = 8.88×10^4
25Y-46	= 7.23 = 7.23×10^0	25Y-58	= -1.67 = -1.67×10^0	25Y-68	= -0.553 = -5.53×10^{-1}	25Y-80	= -0.115 = -1.15×10^{-1}
25Y-47	= 36.9 = 3.69×10^1	25Y-59	= 4.63 = 4.63×10^0	25Y-69	= 0.565 = 5.65×10^{-1}		
25Y-48	= 6.62 = 6.62×10^0	25Y-60	= 89.0 = 8.90×10^1	25Y-70	= 1.07 = 1.07×10^0		
25Y-49	= 0.0000175 = 1.75×10^{-5}			25Y-71	= -23.1 = -2.31×10^1		
25Y-50	= 56.6 = 5.66×10^1			25Y-72	= 0.0779 = 7.79×10^{-2}		

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Calculator Applications

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

How to Write the Answers

A. For all problems except stated problems as noted below—write three significant digits.

1. Examples (* means correct but not recommended)

Correct: 12.3, 123, 123.*, 1.23x10*, 1.23x10⁰*,
1.23x10¹, 1.23x10⁰¹, .0190, 0.0190, 1.90x10⁻²

Incorrect: 12.30, 123.0, 1.23(10)², 1.23·10², 1.230x10²,
1.23*10², 0.19, 1.9x10⁻², 19.0x10⁻³, 1.90E-02,

answers written in parentheses(), brackets[] or braces{} are incorrect

2. Plus or minus one digit error in the third significant digit is permitted.

B. For stated problems

1. Except for integer and dollar sign problems, answers to stated problems should be written with three significant digits.

2. Integer problems are indicated by (integer) in the answer blank. Integer problems answers must be exact, no plus or minus one digit, no decimal point or scientific notation.

3. Dollar sign (\$) problems should be answered to the exact cent, but plus or minus one cent error is permitted. Answers must be in fixed notation. The decimal point and cents are required for exact-dollar answers.

2024 – 2025 UIL MS Calculator Test C

25Z-1. $18.9 + 14.5$ ----- 1=_____

25Z-2. $26 + 17 - 27$ ----- 2=_____

25Z-3. $-196 + 76.9 + 151$ ----- 3=_____

25Z-4. $57 - 35 - 36 + 53$ ----- 4=_____

25Z-5. $81 + 343 - 241 - 238$ ----- 5=_____

25Z-6. $390 + 653 - 340 - 654 + 651$ ----- 6=_____

25Z-7. $0.568 + 1.77 - 1.59 + 1.81 + 1.93$ ----- 7=_____

25Z-8. $(-0.482 + \pi - 1) - (1.22 + 0.761)$ ----- 8=_____

25Z-9. $174 \times 450 \times 535$ ----- 9=_____

25Z-10. $12.7 \times 965 \times 1380 \times 3110$ ----- 10=_____

25Z-11. What is sum of eighty-seven point five, twenty-two and one-third and four pi? ----- 11=_____

25Z-12. If the Texas Math and Science Coaches Association (TMSCA) was founded September 1981, how old is the TMSCA organization in November 2024?----- 12=_____ yrs(integer)

25Z-13. To replace the blade on my lawn mower, I was told it would cost me \$71.49. If the labor cost for blade replacement is \$45.50, how much did the new blade cost?----- 13=\$_____

- 25Z-14. $221/[170 \times 92 \times 89]$ ----- 14=_____
- 25Z-15. $(56/89)[46 - 77]$ ----- 15=_____
- 25Z-16. $\left[\frac{70}{133}\right] [(397/469) + 0.652]$ ----- 16=_____
- 25Z-17. $\{(299)(34 - 73)(307)\} - 2.29 \times 10^6$ ----- 17=_____
- 25Z-18. $\frac{[0.455/(0.402)]/0.0129}{(39.6 \times 76.2)(20.6)}$ ----- 18=_____
- 25Z-19. $\left[\frac{(2860/1210) - (1010/1240)}{0.00653/0.00299}\right]$ ----- 19=_____
- 25Z-20. $\frac{48.7 + 182 + 106}{(1.36 \times 10^{-4})(0.116)(0.642)}$ ----- 20=_____
- 25Z-21. $\frac{(0.0105)(0.345)}{3.46} (0.00208 - 0.00211)$ ----- 21=_____
- 25Z-22. $\frac{(80.1 + 36.8 - 95.6)}{\{(0.00633 - 0.00143)/(3.66 \times 10^{-4})\}}$ ----- 22=_____
- 25Z-23. $\frac{[-(4280 + 2820)(3550 - 3560)]}{(1.25 \times 10^{-4}/(0.348))}$ ----- 23=_____
- 25Z-24. Mike charges \$85/hr for his work as an electrician. If a customer needs \$429.99 worth of equipment installed and it takes Mike 4.75 hours to complete the installation, how much does Mike charge the customer? Note that an 8½% sales tax on the equipment only is included in the total charge. ----- 24=\$_____
- 25Z-25. Maria and her two girlfriends decided to go to an outdoor concert in July. The concert tickets were \$12.75 each, the nachos for each girl cost \$7.50 each, and the soft drinks cost each girl cost \$4.50 each. If the girls took public transportation to the concert, and it cost \$3.75 each roundtrip, what was the total cost for all the girls to go to the concert? 25=\$_____
- 25Z-26. Li drove 5.9 miles to his favorite gas station and filled up his car's gas tank. He then drove 60.7 miles to see his brother. He then drove 102 miles to visit his sister. Li then drove back home on the exact same route. The next day, he drove back to the same gas station where he filled up his car earlier and put in 12.247 gallons of fuel. What is his car's miles per gallon (mpg) usage? ----- 26=_____ mpg

25Z-27. $(3.99 \times 10^{-4})[(12.6/4.99)(0.154 + 0.0633)]$ ----- 27=_____

25Z-28. $\frac{(210 + 222)(2.87 + 7.86)}{(2.57 \times 10^{12})}$ ----- 28=_____

25Z-29. $\frac{(3.54 \times 10^9) + (5.73 \times 10^9)}{(-1.18)(3.24) - 1.42}$ ----- 29=_____

25Z-30. $\frac{1}{-0.172} + \frac{1}{(0.122 - 0.237)}$ ----- 30=_____

25Z-31. $\frac{1}{-0.472} + \frac{1}{(\pi)(0.436 - 0.639)}$ ----- 31=_____

25Z-32. $\frac{(28.5 + 10)}{(1.11 \times 10^{11})}$ ----- 32=_____

25Z-33. $\left[\frac{1/162}{1/200}\right][1.14 \times 10^6]$ ----- 33=_____

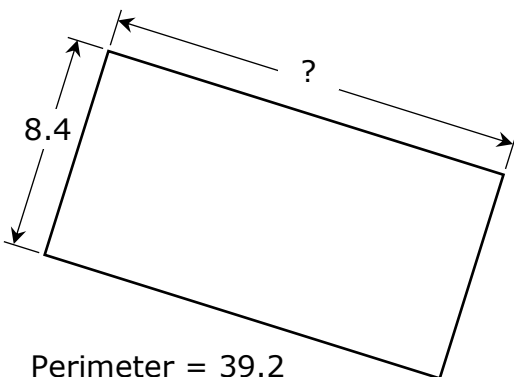
25Z-34. $\frac{1}{40.9} - \frac{1}{(11 + 85.6)}$ ----- 34=_____

25Z-35. A measuring cup placed underneath a leaky faucet collected 5.75 ounces of water in $1\frac{3}{4}$ hours. At this rate, how long will it take the leaky faucet to leak 5 gallons of water? ----- 35=_____ hrs

25Z-36. On one of the TxDot highway marquees, I noticed that it stated that the next town was 12 miles and 15 minutes. What average speed, in miles per hour (mph), would I need to be driving to accomplish that feat? ----- 36=_____ mph

25Z-37.

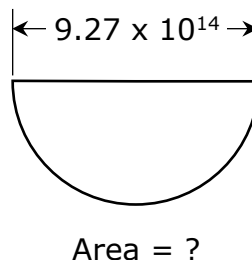
RECTANGLE



25Z-37=_____

25Z-38.

SEMICIRCLE



25Z-38=_____

25Z-39.
$$\sqrt[4]{\frac{144 + 594}{0.165 - 0.0573}}$$

39=

25Z-40.
$$\frac{(37200 + 39300)^3}{(0.253 - 0.693)^2}$$

40=

25Z-41.
$$\left[\frac{292 + (1/(0.00188))}{(861/266) - 2.14}\right]^2$$

41=

25Z-42.
$$(1/(0.038))(11100 - 7870)^2$$

42=

25Z-43.
$$(13000)\sqrt{1510 + 2210 + 6650}$$

43=

25Z-44.
$$\sqrt{11.3} + \sqrt{17.3 + 42.8} - (\pi)\sqrt{37.6}$$

44=

25Z-45.
$$(57100)\sqrt[4]{612 + 344 - 248}$$

45=

25Z-46.
$$\frac{1}{\sqrt{1070 + 832 + 1310}} + \left(\frac{1}{\sqrt{29.6}}\right)^2$$

46=

25Z-47.
A twelve-foot-long pole, on level ground, leaned against a building. If the top of the pole reached eight feet above the ground, what angle did the ladder make with the building?

47=
deg

25Z-48.
The minute-hand of an analog clock is 6.25" long while the hour-hand is 2.73" long. At exactly 9 o'clock, what is the shortest distance between the end-tips of the clock hands?

48=
"

25Z-49.

TRIANGLE

Area = ?

25Z-49=

25Z-50.

RIGHT TRIANGLE

25Z-50=
deg

$$25Z-51. \quad \sqrt{\frac{0.051}{(0.022)(0.36)}} + \frac{(6.32 \times 10^5 - 7.33 \times 10^5)}{(6810 + 9960)} \text{ ----- } 51 = \underline{\hspace{2cm}}$$

$$25Z-52. \quad \left[\frac{127 - 89.2 + \sqrt{2.82 \times 10^6 / 2120}}{-6.14 + 18.6} \right]^3 \text{ ----- } 52 = \underline{\hspace{2cm}}$$

$$25Z-53. \quad \left[\frac{442 + 212 + \sqrt{2.58 \times 10^5 + 70000}}{225/341} \right]^3 \text{ ----- } 53 = \underline{\hspace{2cm}}$$

$$25Z-54. \quad \sqrt{\frac{1/(43.2 - 15.3)}{(7.82)(234 + 388)^6}} \text{ ----- } 54 = \underline{\hspace{2cm}}$$

$$25Z-55. \quad (7120)(2.97 \times 10^9)^{1/2} - [(2.31 \times 10^{12})(9.70 \times 10^{12})]^{1/3} \text{ --- } 55 = \underline{\hspace{2cm}}$$

$$25Z-56. \quad \sqrt{\frac{(36100)(4600)}{(60800)(21800)}} - 0.284 + 0.133 \text{ ----- } 56 = \underline{\hspace{2cm}}$$

$$25Z-57. \quad \sqrt{\frac{(149)(3930)}{(545) + (1610)}} - 17.1 \text{ ----- } 57 = \underline{\hspace{2cm}}$$

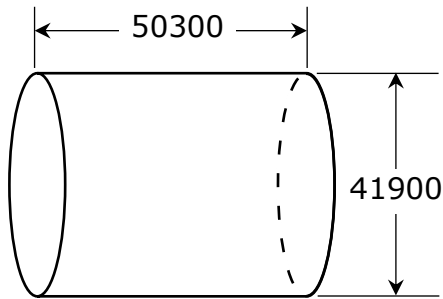
$$25Z-58. \quad \sqrt{\frac{(21.1)(63.9)}{(20) + (27.5)}} + 1/(0.716)^5 \text{ ----- } 58 = \underline{\hspace{2cm}}$$

25Z-59. Between 2022 and 2023 the city of Georgetown, Texas grew from 87,062 to 96,312. What percent increase did this represent? ----- 59 = %

25Z-60. According to an article from the Animal Health Foundation, a formula to convert a cat's age, in years, to a human age, in years, involves using 15 human-years to represent the cat's first year of life, then adding 10 human-years to represent the second year of the cat's life and then adding 4 human-years for every year of the cat's life after that. According to this formula, what is the human age equivalent for Missy, our 19-year-old cat? ----- 60 = years

25Z-61.

RIGHT CIRCULAR CYLINDER

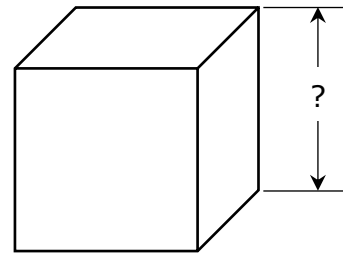


Volume = ?

25Z-61= _____

25Z-62.

SOLID CUBE



Total Surface Area = 95700000

25Z-62= _____

25Z-63. $\frac{4!}{24!}$ ----- 63= _____

25Z-64. (deg) $(15400 + 23700)\tan(36.2^\circ)$ ----- 64= _____

25Z-65. $(143 - \pi)e^{0.577}$ ----- 65= _____

25Z-66. (deg) $(48700 - 55000)\cos(1.56^\circ) + 1130$ ----- 66= _____

25Z-67. (deg) $\cos(10.9^\circ - 6.8^\circ) + 0.222$ ----- 67= _____

25Z-68. (deg) $\frac{\cos(29.4^\circ)}{2.08 + 1.58}$ ----- 68= _____

25Z-69. (rad) $\cos[(52.5 - 63.1)(0.492)]$ ----- 69= _____

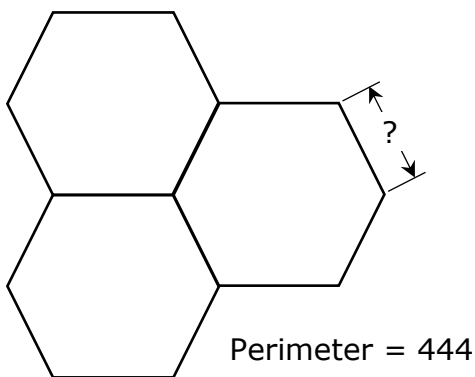
25Z-70. $(234 - 32.4 + 86.2)^{5/3}$ ----- 70= _____

25Z-71. On July 10, 1913, the hottest recorded temperature in the US was reported to be in Furnace Creek (Greenland Ranch), California. If this temperature was listed as 56.7°C , what is this temperature in degrees Fahrenheit ($^\circ\text{F}$)?----- 71= _____ $^\circ\text{F}$

25Z-72. A 44 Lb. bag of cat food that costs \$28.77 has bits of cat food that measure 4 bits of food per gram. If there are about 453.592 grams per pound, how much did each bit of cat food cost?----- 72= _____ ¢

25Z-73.

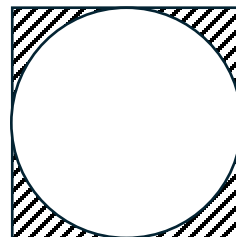
IDENTICAL REGULAR HEXAGONS



25Z-73=_____

25Z-74.

SQUARE AND CIRCLE



Area of Circle = 100

Hatched area = ?

25Z-74=_____

25Z-75. $\frac{1.84 + \sqrt{(5.26)(5.32)} + (\pi)(1.78)}{\sqrt{\sqrt{0.0063 + 0.0165}}}$ ----- 75=_____

25Z-76. $\frac{\text{Log}(1.91 \times 10^9 + 7.91 \times 10^8)}{1.8}$ ----- 76=_____

25Z-77. $\text{Log}(32.3 + 36.5 + 22.6)$ ----- 77=_____

25Z-78. $\text{Ln}\left[\frac{4.16 + 3.78 + 11.1}{976 - 193 - 371}\right]$ ----- 78=_____

25Z-79. $2 + 4 + 6 + \dots + 784$ ----- 79=_____

25Z-80. $-\frac{1}{(6.8)} + \frac{1}{3(6.8)^3} - \frac{1}{5(6.8)^5} + \frac{1}{7(6.8)^7}$ ----- 80=_____

2024 – 2025 UIL MS Calculator Test C Answer Key

25Z-1	= 33.4 = 3.34×10^1	25Z-14	= 0.000159 = 1.59×10^{-4}	25Z-27	= 0.000219 = 2.19×10^{-4}
25Z-2	= 16.0 = 1.60×10^1	25Z-15	= -19.5 = -1.95×10^1	25Z-28	= 1.80×10^{-9}
25Z-3	= 31.9 = 3.19×10^1	25Z-16	= 0.789 = 7.89×10^{-1}	25Z-29	= -1.77×10^9
25Z-4	= 39.0 = 3.90×10^1	25Z-17	= -5.87×10^6	25Z-30	= -14.5 = -1.45×10^1
25Z-5	= -55.0 = -5.50×10^1	25Z-18	= 0.00141 = 1.41×10^{-3}	25Z-31	= -3.69 = -3.69×10^0
25Z-6	= 700 = 7.00×10^2	25Z-19	= 0.709 = 7.09×10^{-1}	25Z-32	= 3.47×10^{-10}
25Z-7	= 4.49 = 4.49×10^0	25Z-20	= 3.32×10^7	25Z-33	= 1.41×10^6
25Z-8	= -0.321 = -3.21×10^{-1}	25Z-21	= -3.14×10^{-8}	25Z-34	= 0.0141 = 1.41×10^{-2}
25Z-9	= 4.19×10^7	25Z-22	= 1.59 = 1.59×10^0	25Z-35	= 195 = 1.95×10^2
25Z-10	= 5.26×10^{10}	25Z-23	= 1.98×10^8	25Z-36	= 48.0 = 4.80×10^1
25Z-11	= 122 = 1.22×10^2	25Z-24	= 870.29 Dollar Answer	25Z-37	= 11.2 = 1.12×10^1
25Z-12	= 43 Integer Answer	25Z-25	= 85.50 Dollar Answer	25Z-38	= 3.37×10^{29}
25Z-13	= 25.99 Dollar Answer	25Z-26	= 27.1 = 2.71×10^1		

2024 – 2025 UIL MS Calculator Test C Answer Key

25Z-39	= 9.10	25Z-51	= -3.49	25Z-61	= 6.94×10^{13}	25Z-73	= 37.0
	= 9.10×10^0		= -3.49×10^0	25Z-62	= 3990		= 3.70×10^1
25Z-40	= 2.31×10^{15}	25Z-52	= 212		= 3.99×10^3	25Z-74	= 27.3
			= 2.12×10^2	25Z-63	= 3.87×10^{-23}		= 2.73×10^1
25Z-41	= 564000	25Z-53	= 6.43×10^9	25Z-64	= 28600	25Z-75	= 32.7
	= 5.64×10^5				= 2.86×10^4		= 3.27×10^1
25Z-42	= 2.75×10^8	25Z-54	= 2.81×10^{-10}	25Z-65	= 249	25Z-76	= 5.24
					= 2.49×10^2		= 5.24×10^0
25Z-43	= 1.32×10^6	25Z-55	= 1.06×10^8	25Z-66	= -5170	25Z-77	= 1.96
					= -5.17×10^3		= 1.96×10^0
25Z-44	= -8.15	25Z-56	= 0.203				
	= -8.15×10^0		= 2.03×10^{-1}	25Z-67	= 1.22	25Z-78	= -3.07
					= 1.22×10^0		= -3.07×10^0
25Z-45	= 295000	25Z-57	= -0.616				
	= 2.95×10^5		= -6.16×10^{-1}	25Z-68	= 0.238	25Z-79	= 154000
					= 2.38×10^{-1}		= 1.54×10^5
25Z-46	= 0.0514	25Z-58	= 10.6	25Z-69	= 0.482	25Z-80	= -0.146
	= 5.14×10^{-2}		= 1.06×10^1		= 4.82×10^{-1}		= -1.46×10^{-1}
25Z-47	= 48.2	25Z-59	= 10.6				
	= 4.82×10^1		= 1.06×10^1	25Z-70	= 12500		
					= 1.25×10^4		
25Z-48	= 6.82	25Z-60	= 93.0	25Z-71	= 134		
	= 6.82×10^0		= 9.30×10^1		= 1.34×10^2		
25Z-49	= 2.21×10^9			25Z-72	= 0.0360		
					= 3.69×10^{-2}		
25Z-50	= 57.6						
	= 5.76×10^1						

CONTESTANT NUMBER:

FOR GRADER USE ONLY

Test/Tiebreaker (#correct)

/ Initials

/ Initials

Papers contending to place:

_____/_____**Initials**



University Interscholastic League A+ Chess Puzzle Contest • Answer Sheet

Write your contestant number in the upper right corner, and circle your grade below.

Circle Grade Level: 2 3 4 5 6 7 8

Test (circle only one answer for each question)

1. a b c d

11. a b c d

2. a b c d

- 12.** a b c d

- 3.** a b c d

- 13.** a b c d

4. a b c d

14. a b c d

5. a b c d

- 15.** a b c d

6. a b c d

- 16.** a b c d

7. a b c d

- 17.** a b c d

8. a b c d

- 18.** a b c d

9. a b c d

- 19.** a b c d

- 10.** a b c d

20. a b c d

**Questions
#17- 20
only for
Grades 4-8**

Tiebreaker (circle only one answer for each question)

1. a b c d

5. a b c d

- 2.** a b c d

6. a b c d

3. a b c d

7. a b c d

4. a b c d

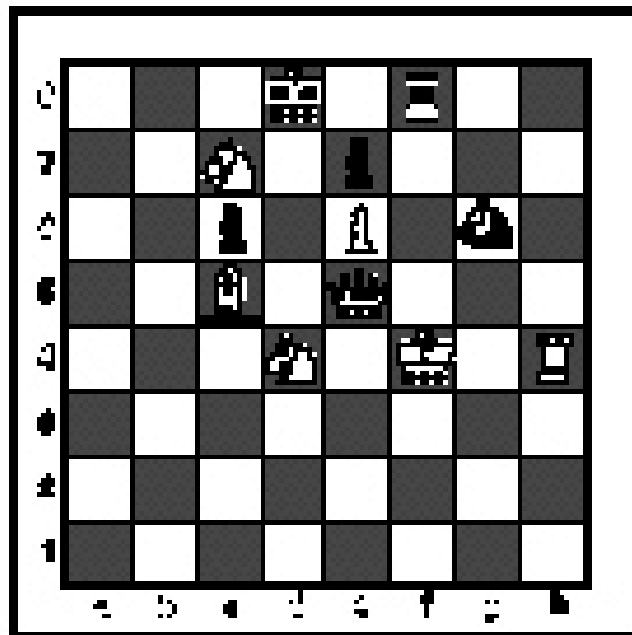
8. a b c d

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League

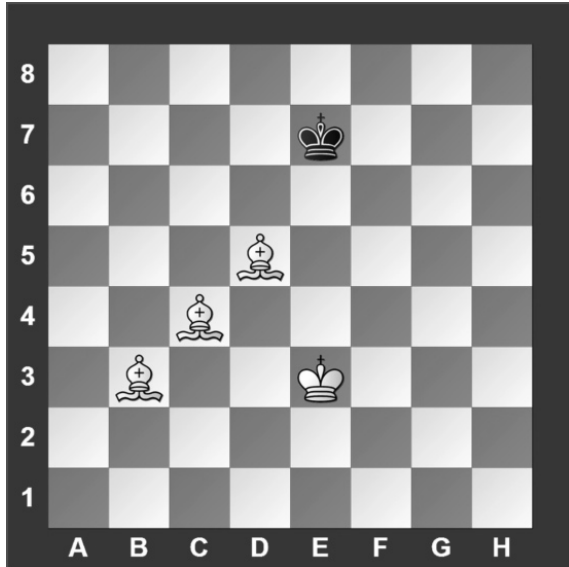


Chess Puzzle Solving

TIEBREAKER - ALL GRADES

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

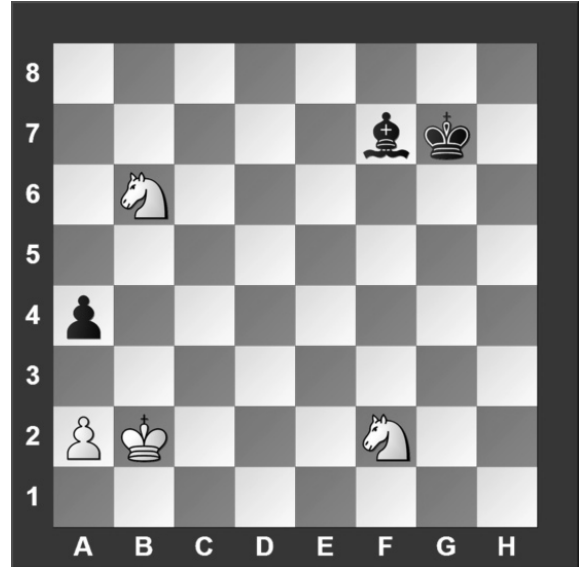
#1. White to move



What should be the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

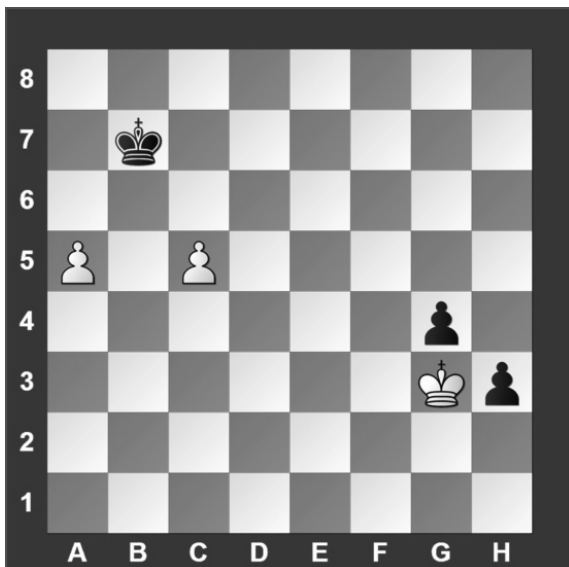
#2. White to move



What is White's best move?

- a) a3
- b) $\text{N} \times \text{a4}$
- c) $\text{B} \text{a3}$
- d) $\text{N} \text{e4}$

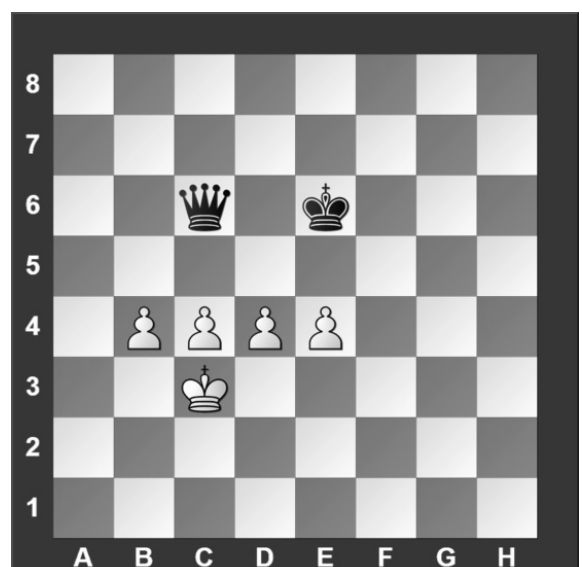
#3. White to move



With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

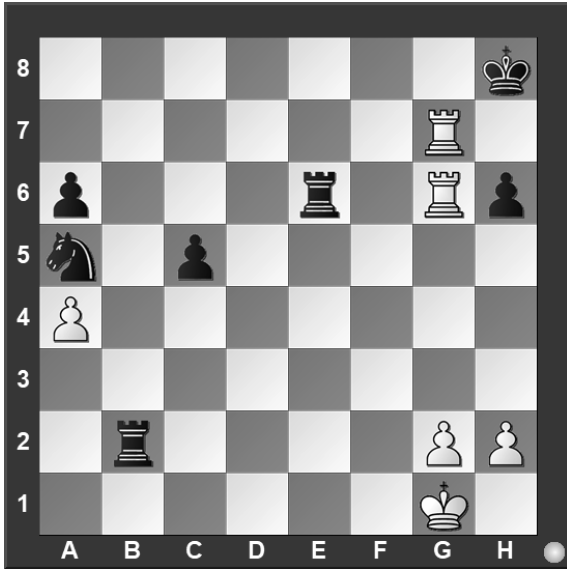
#4. White to move



What is White's best move?

- a) b5
- b) c5
- c) d5
- d) e5

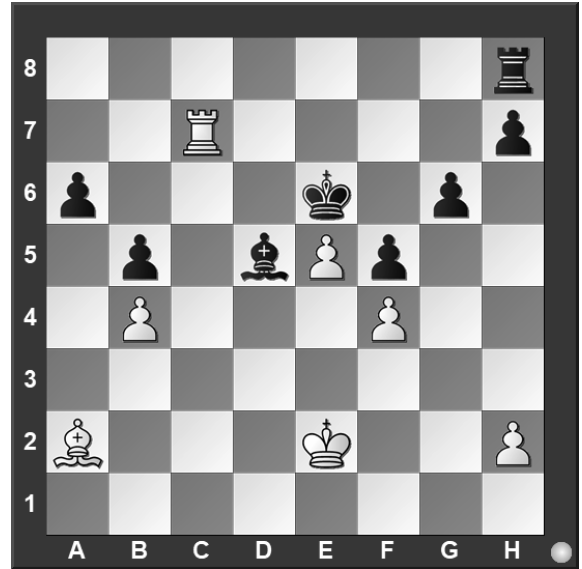
#5. White to move



How many moves does it take to check-mate Black?

- a) 1
- b) 2
- c) 3
- d) There is no checkmate

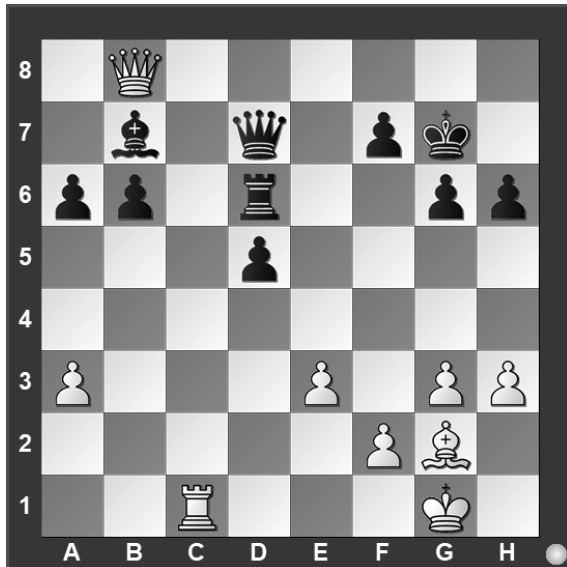
#6. White to move



What is White's best move?

- a) ♖c6
- b) ♙x d5
- c) ♖c5
- d) ♖a7

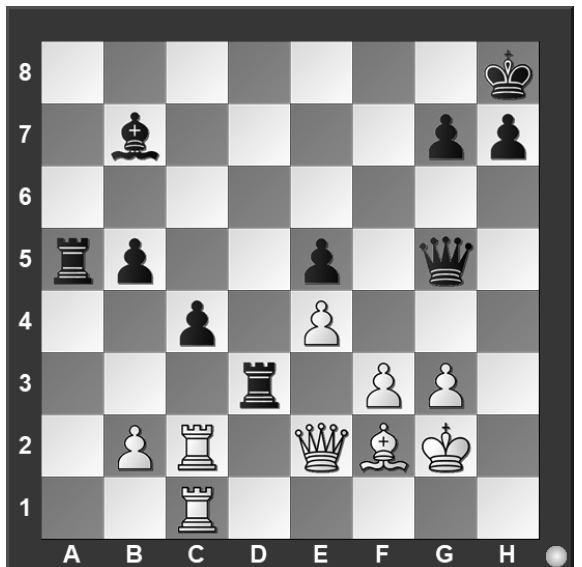
#7. White to move



What is White's best move?

- a) ♖c7
- b) h4
- c) ♙c7
- d) ♙f3

#8. White to move



What is White's best move?

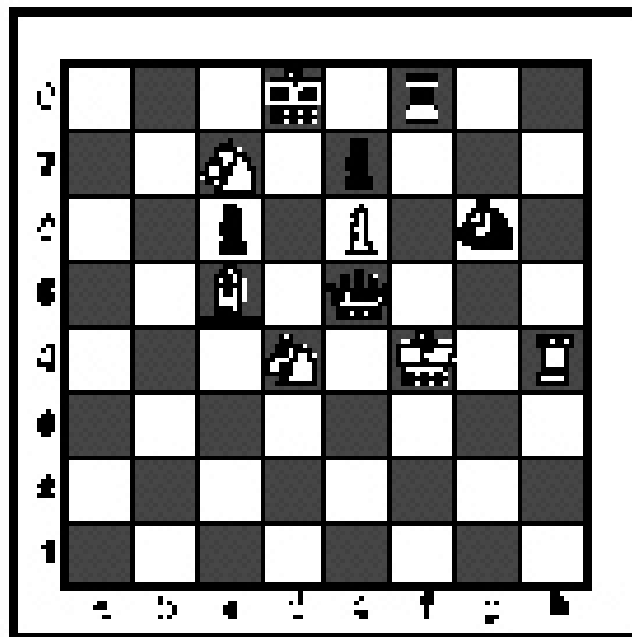
- a) ♖d1
- b) ♙x d3
- c) b4
- d) ♙b6

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 2 & 3

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Invitational Test for grades two and three. There are 16 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each correct answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

**a-h**

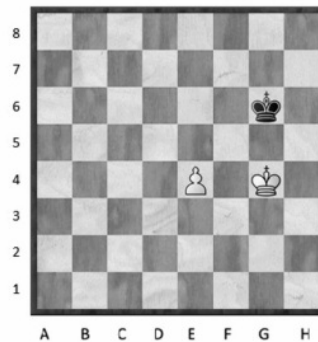
(We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.

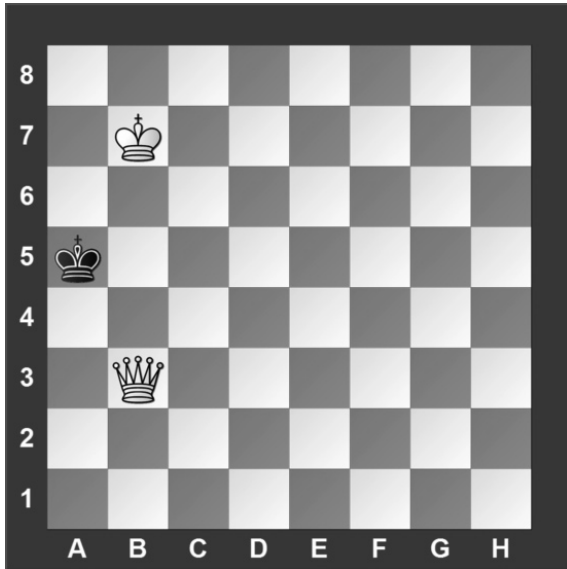
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

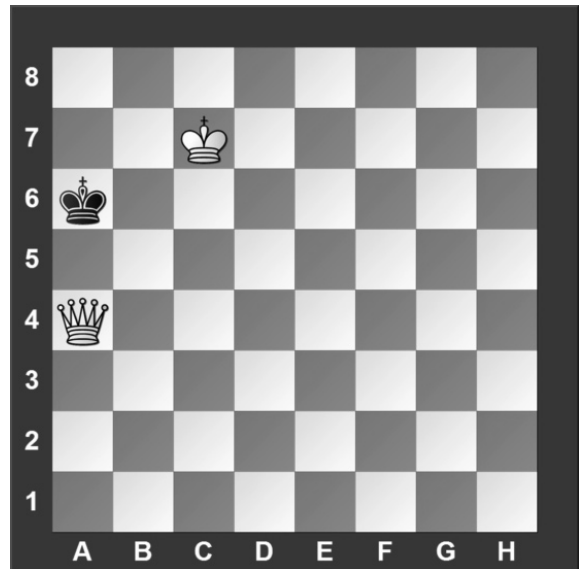
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

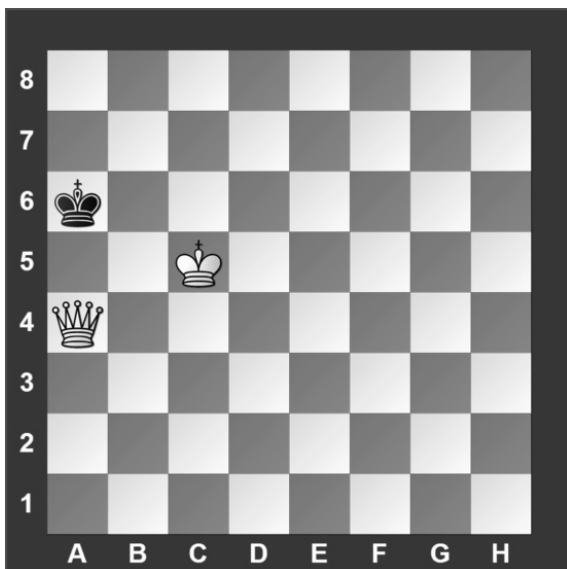
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

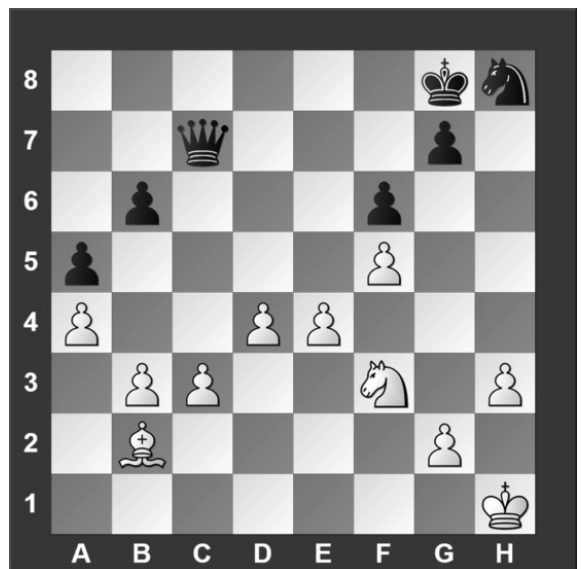
#3. Black to move



What term best describes this situation?

- a) Black is in check.
- b) Black is in stalemate.
- c) Black is in checkmate.
- d) None of the above.

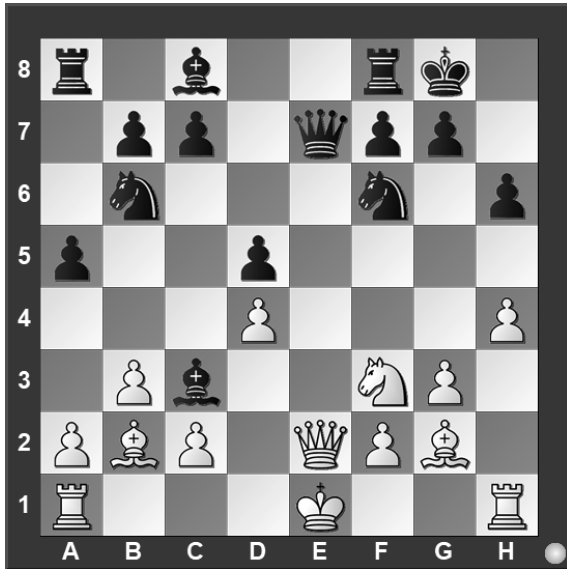
#4.



Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.

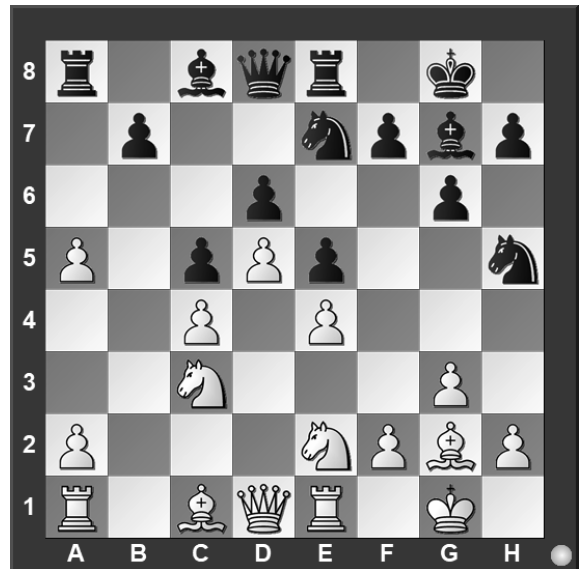
#5. White to move



Which move is possible for White?

- a) Short Castle.
- b) Long Castle.
- c) To capture the bishop.
- d) To capture the queen.

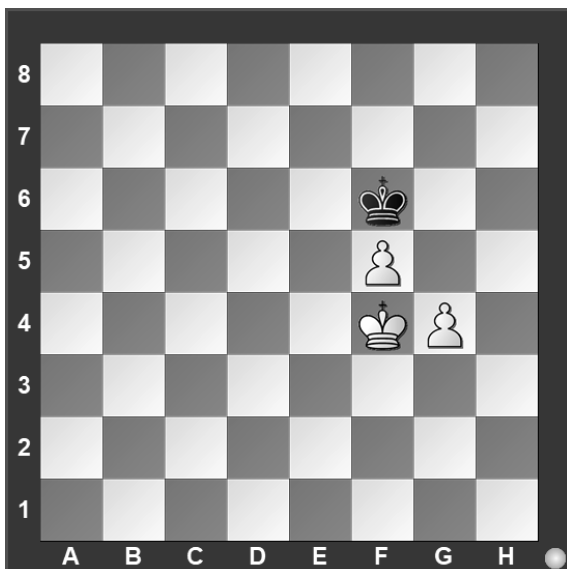
#6. White to move



Black just played c7 to c5. Which pawn can be captured?

- a) Black's e-pawn.
- b) Black's d-pawn.
- c) Black's c-pawn.
- d) White can't capture a pawn.

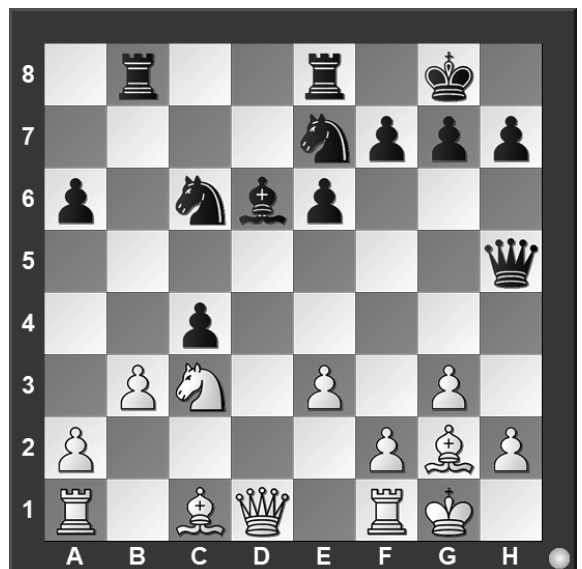
#7. White to move



With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

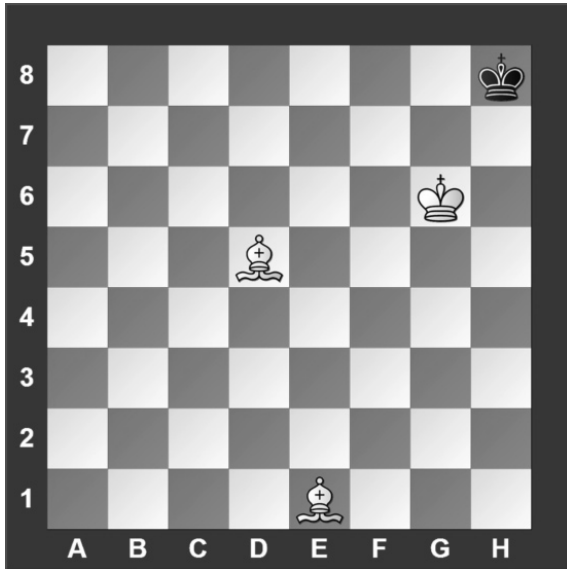
#8. White to move



What piece should White capture?

- a) Queen
- b) Bishop
- c) Knight
- d) pawn

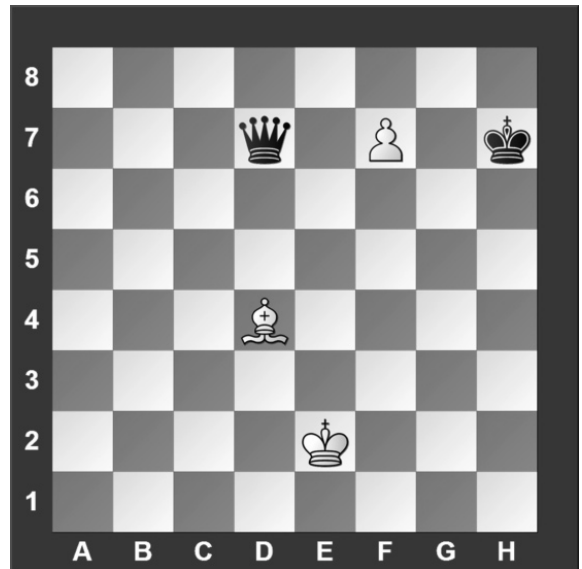
#9. White to move



What is White's best move?

- a) ♔f7
- b) ♔b3
- c) ♔c3
- d) ♔h6

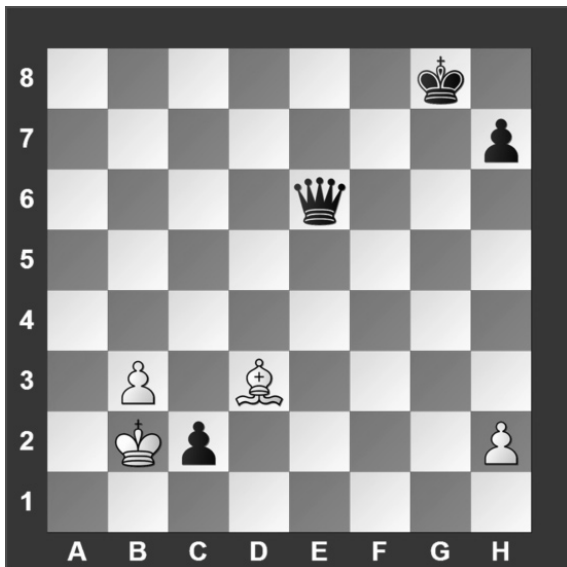
#10. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Knight
- d) Bishop

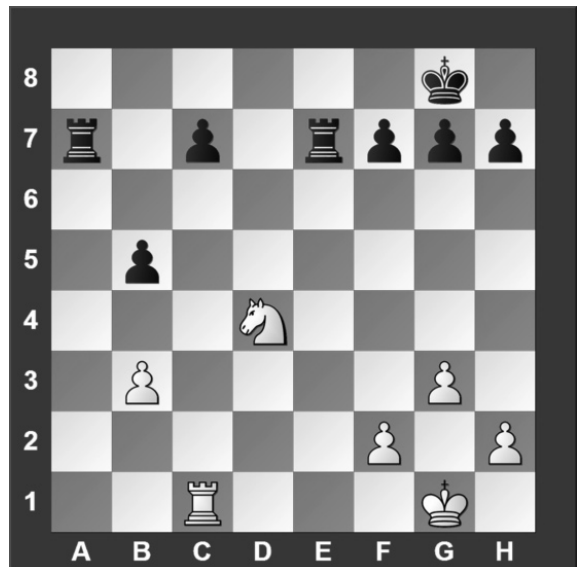
#11. White to move



What is White's best move?

- a) ♔xc2
- b) ♔c4
- c) ♔xh7
- d) ♔xc2

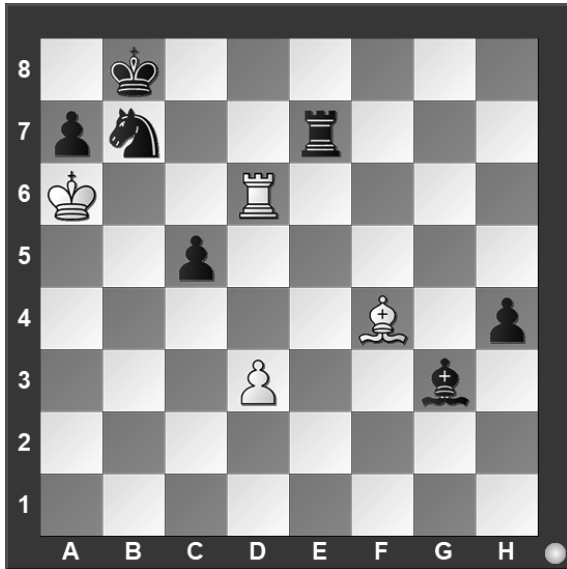
#12. White to move



What is White's best move?

- a) ♔c6
- b) ♔f5
- c) ♔xc7
- d) b4

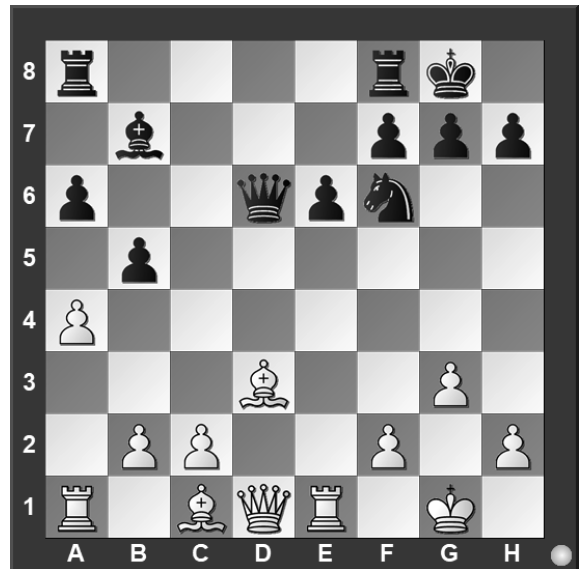
#13. White to move



If White can checkmate Black in one move, what is the checkmating move?

- a) ♖d7
- b) ♖d8
- c) ♖c6
- d) There is no checkmate

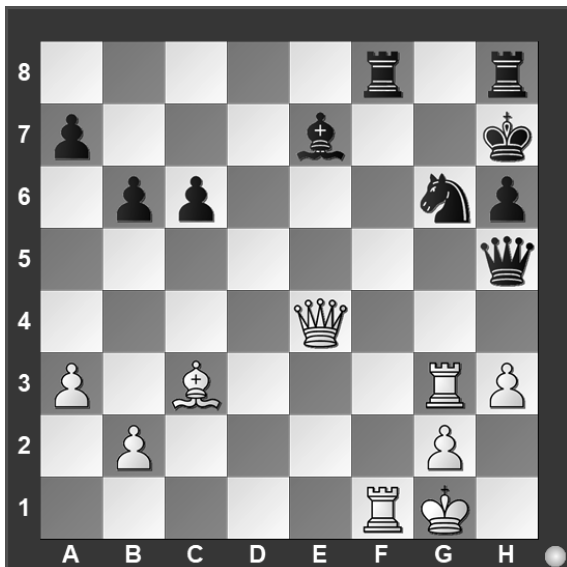
#14. White to move



What is White's best move?

- a) a×b5
- b) ♕f4
- c) ♕×h7
- d) ♕g5

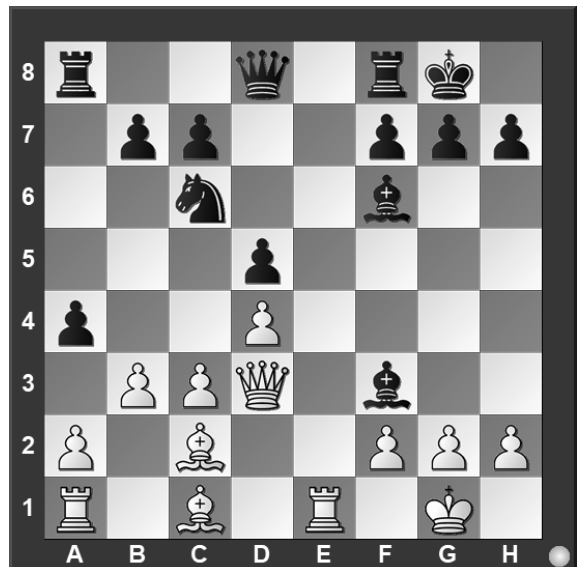
#15. White to move



What is White's best move?

- a) ♔×e7
- b) ♔×c6
- c) ♖×f8
- d) ♕×h8

#16. White to move



What is White's best move?

- a) ♔×f3
- b) g×f3
- c) ♔×h7
- d) b×a4



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Invitational — Grades 2 & 3**

ANSWER KEY

Test

- | | | | |
|----|---|-----|---|
| 1. | B | 9. | C |
| 2. | A | 10. | C |
| 3. | A | 11. | B |
| 4. | B | 12. | A |
| 5. | C | 13. | B |
| 6. | C | 14. | C |
| 7. | A | 15. | A |
| 8. | A | 16. | C |

Tiebreaker

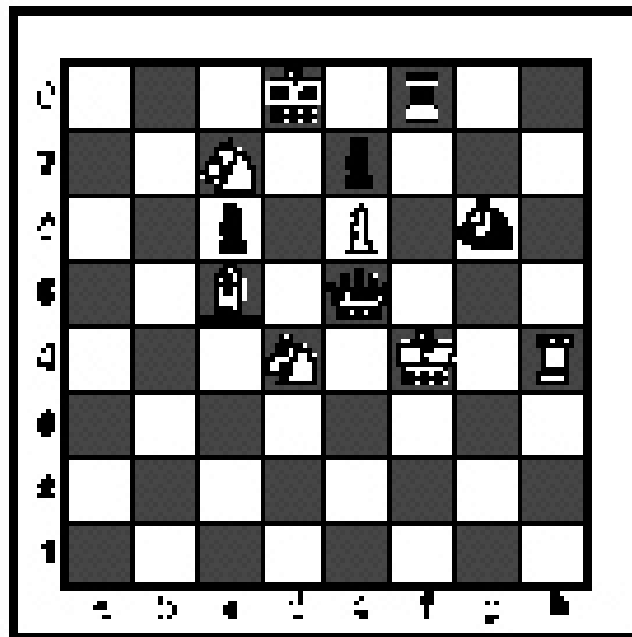
- | | | | |
|----|---|----|---|
| 1. | C | 5. | B |
| 2. | A | 6. | A |
| 3. | C | 7. | A |
| 4. | C | 8. | B |

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 4 & 5

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Invitational Test for grades four and five. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each correct answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

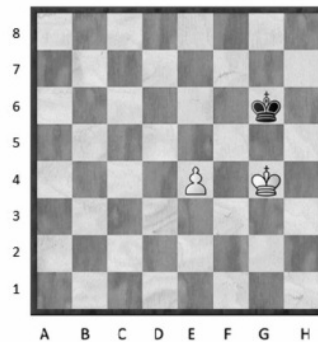
**a-h**

(We write the file it's on.)

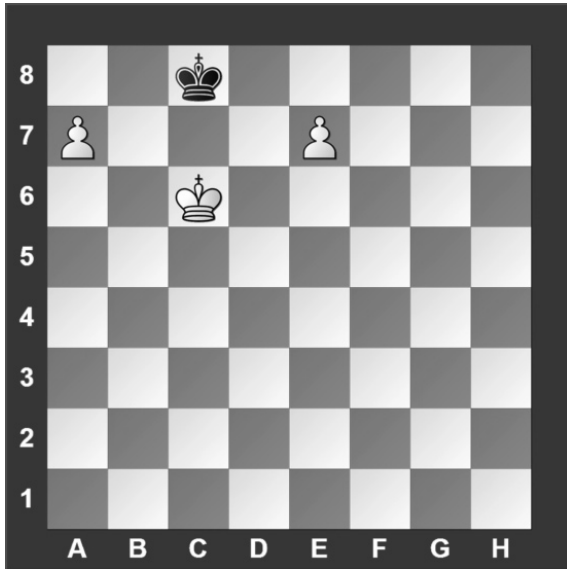
- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

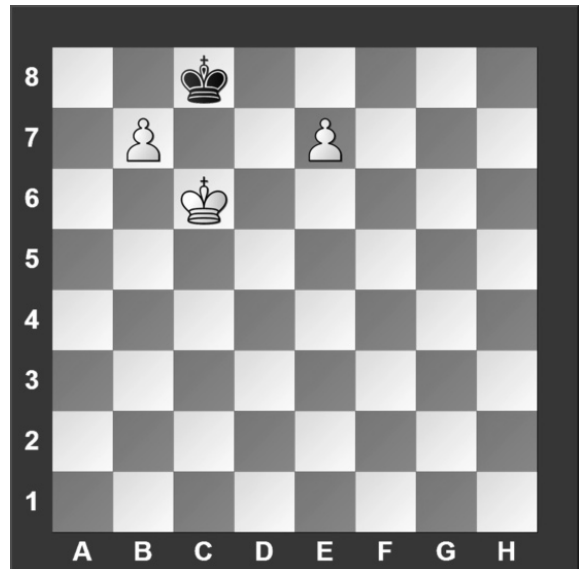
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

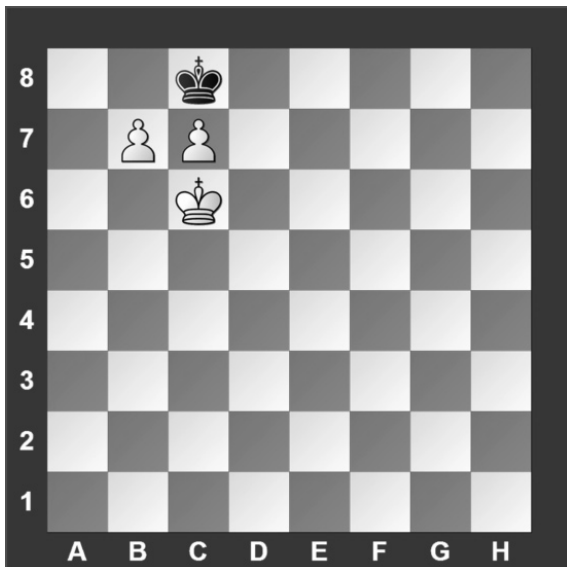
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3 Black to move.



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

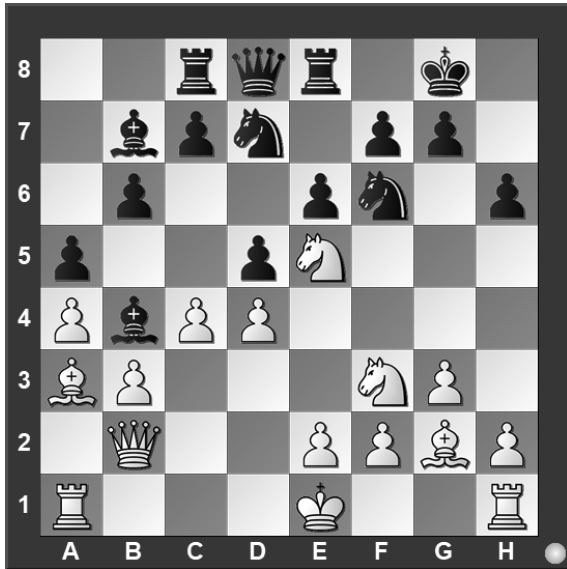
#4.



Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.

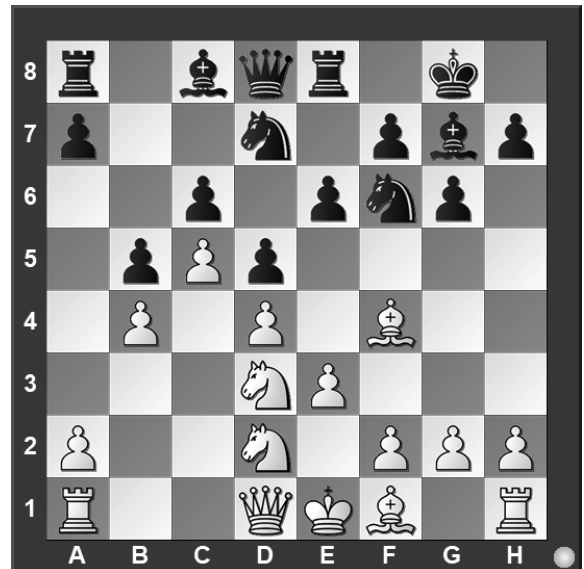
#5. White to move



Which move is possible for White?

- a) Short Castle .
- b) Long Castle.
- c) To capture the bishop.
- d) To capture the knight.

#6. White to move



Black just played b7 to b5. Which pawn can be captured?

- a) Black's b-pawn.
- b) Black's c-pawn.
- c) Black's d-pawn.
- d) White can't capture a pawn.

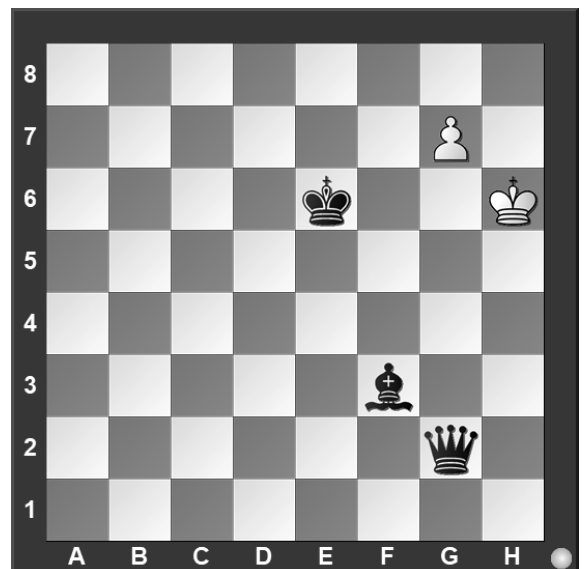
#7. White to move



How many moves does it take to check-mate Black?

- a) 1
- b) 2
- c) 3
- d) There is no checkmate.

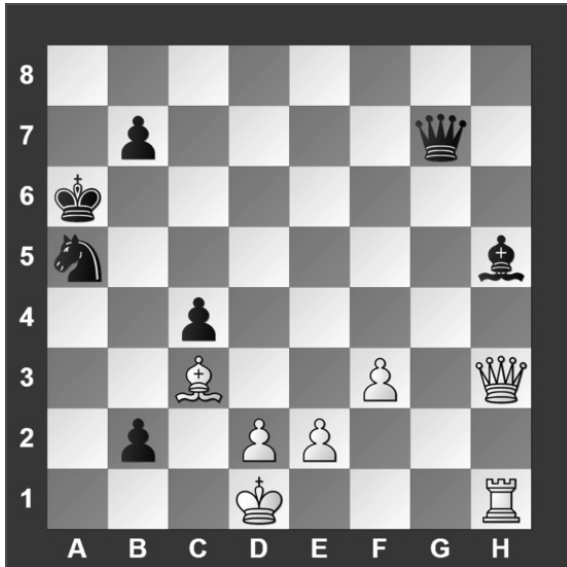
#8. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Bishop
- d) Knight

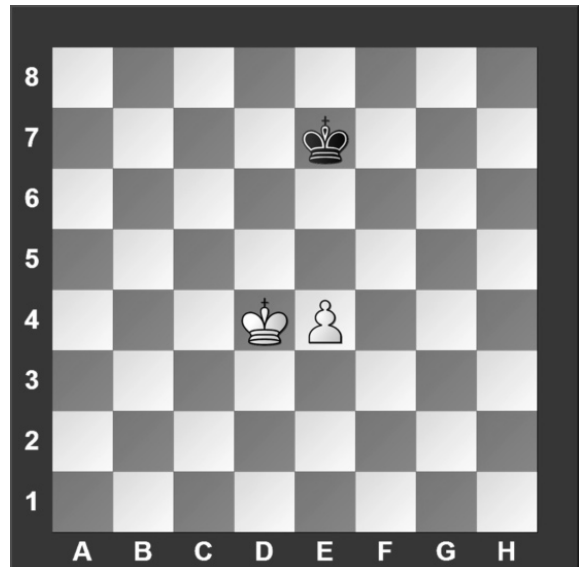
#9. White to move



What piece should White capture?

- a) Queen
- b) Bishop
- c) Knight
- d) Pawn

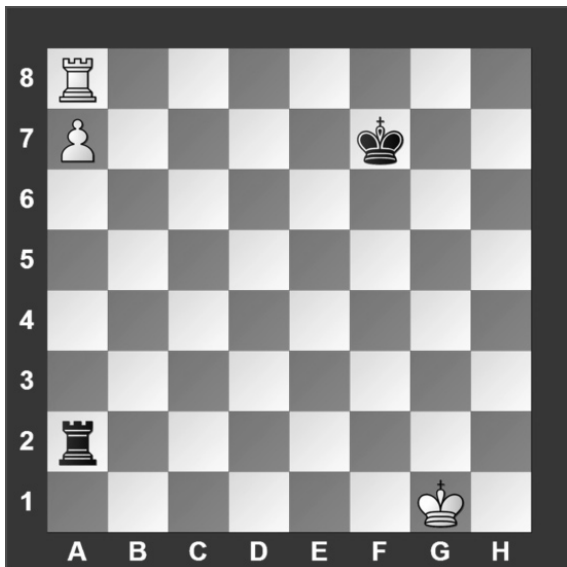
#10. White to move



With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

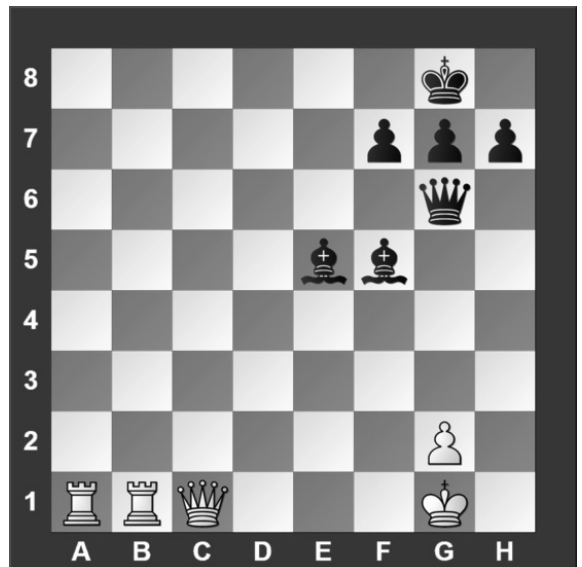
#11. White to move



What is White's best move?

- a) ♖d8
- b) ♖f8
- c) ♖h8
- d) ♔h1

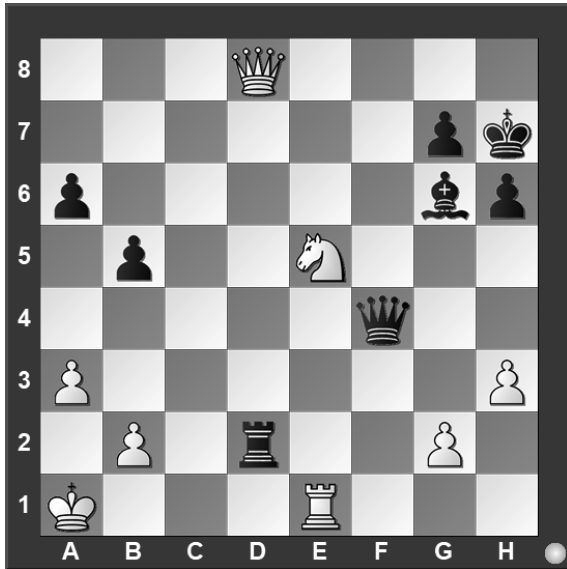
#12. White to move



What is White's best move?

- a) ♕c8
- b) ♖a8
- c) ♖b8
- d) ♔h1

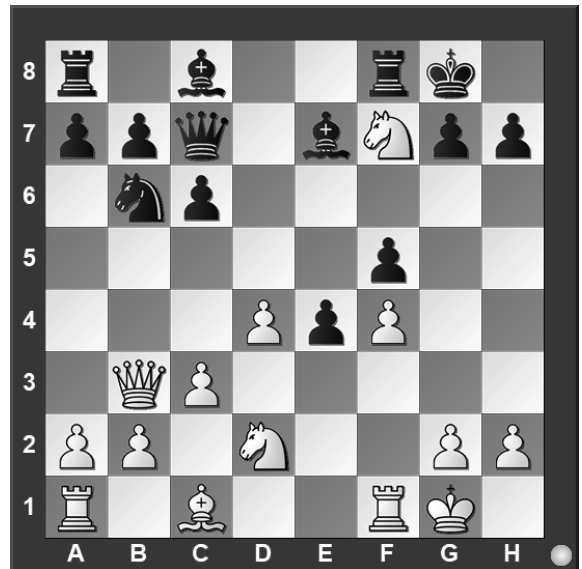
#13. White to move



What is White's best move?

- a) ♖d7
- b) ♔h8
- c) ♖xg6
- d) ♔b6

#14. White to move



If White can checkmate Black in three moves, what is the *first* move?

- a) ♖g5
- b) ♖e5
- c) ♖h6
- d) ♖d6

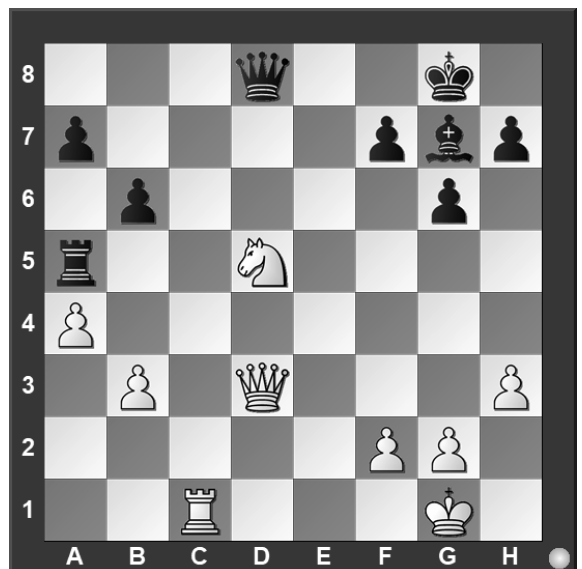
#15. White to move



What is White's best move?

- a) ♔g6
- b) ♔xf8
- c) ♔e7
- d) d8♔

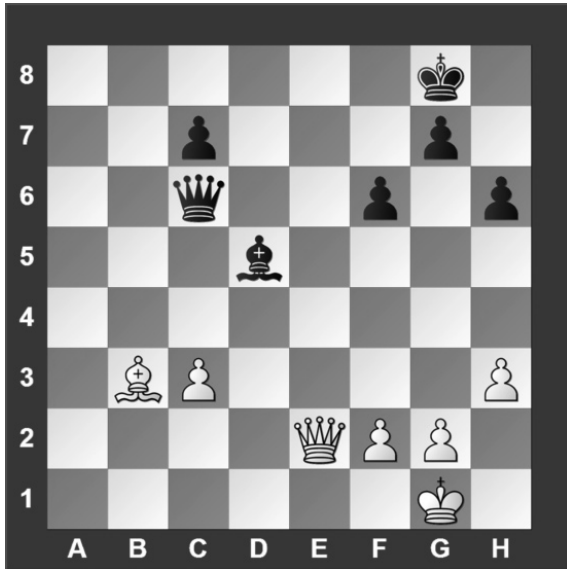
#16. White to move



What is White's best move?

- a) ♖d1
- b) ♖f4
- c) ♖e7
- d) ♖c8

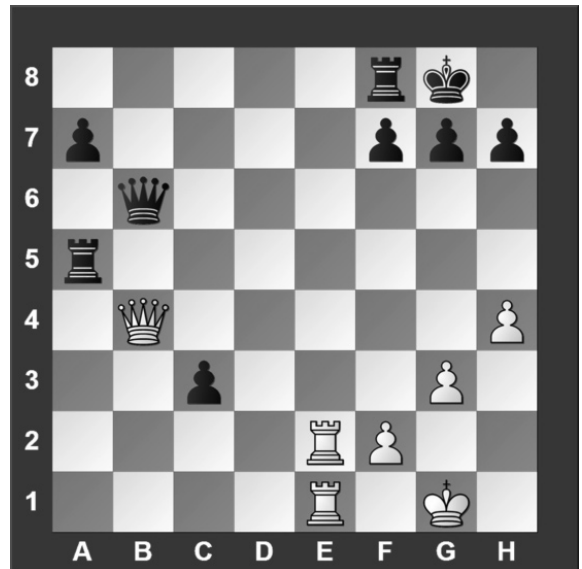
#17. White to move



What is White's best move?

- a) ♔e6
- b) ♔c4
- c) ♔a6
- d) ♔e4

#18. White to move



What is White's best move?

- a) ♔xb6
- b) ♔xa5
- c) ♔xc3
- d) ♔xf8

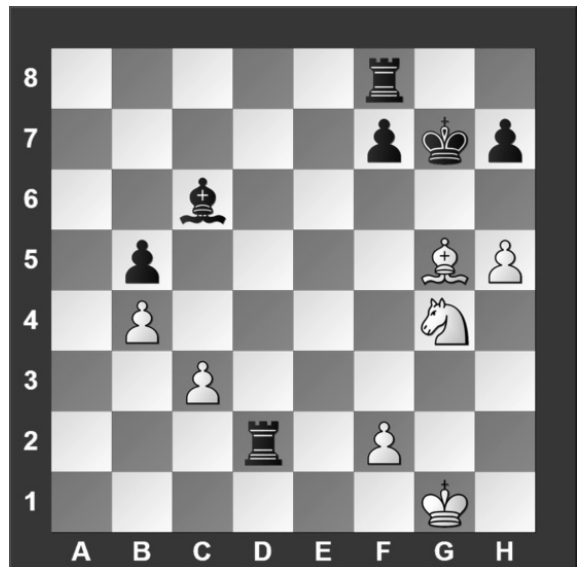
#19. White to move



If White can checkmate Black in three moves, what's the *first* move?

- a) ♔xd7
- b) ♔xh7
- c) ♔g1
- d) ♔h6

#20. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♔f6
- b) ♔h6
- c) h6
- d) White can't checkmate Black in two moves.



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Invitational — Grades 4 & 5**

ANSWER KEY

Test

- | | | | |
|-----|---|-----|---|
| 1. | B | 11. | C |
| 2. | C | 12. | B |
| 3. | A | 13. | B |
| 4. | A | 14. | C |
| 5. | C | 15. | B |
| 6. | A | 16. | D |
| 7. | B | 17. | D |
| 8. | A | 18. | D |
| 9. | D | 19. | B |
| 10. | A | 20. | A |

Tiebreaker

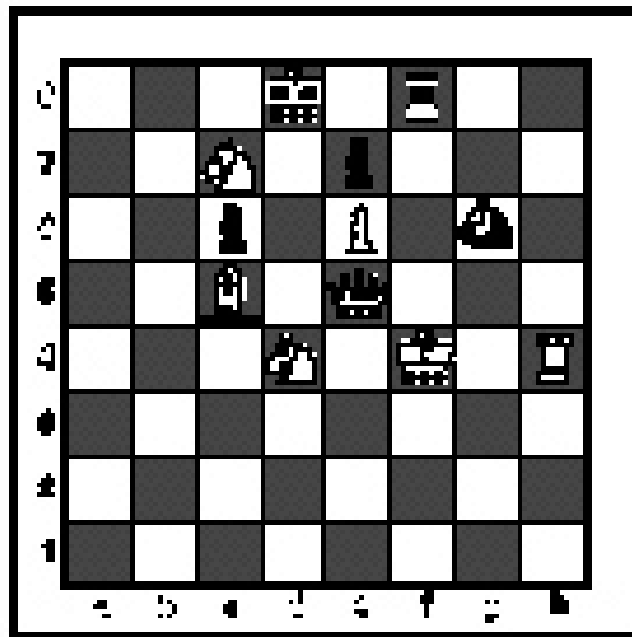
- | | | | |
|----|---|----|---|
| 1. | C | 5. | B |
| 2. | A | 6. | A |
| 3. | C | 7. | A |
| 4. | C | 8. | B |

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 6, 7, 8

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Invitational Test for grades six through eight. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each cor-rect answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

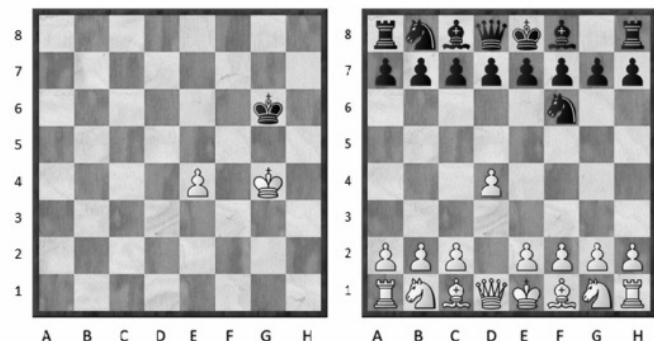
**a-h**

(We write the file it's on.)

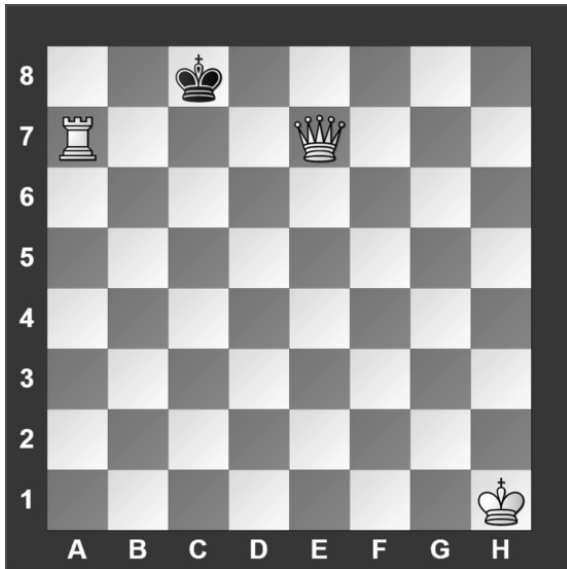
- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

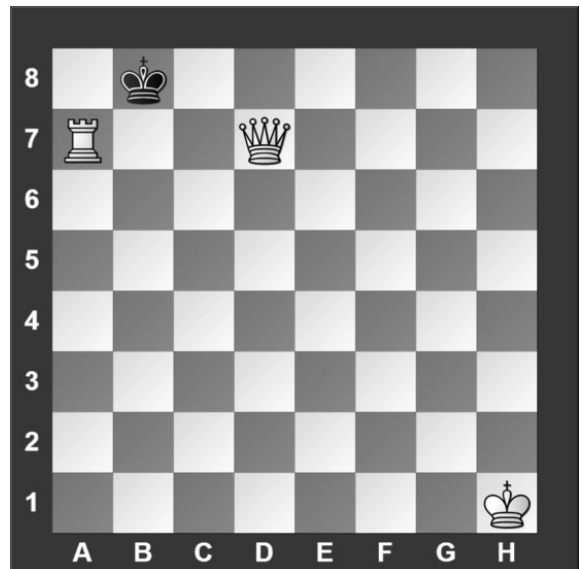
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

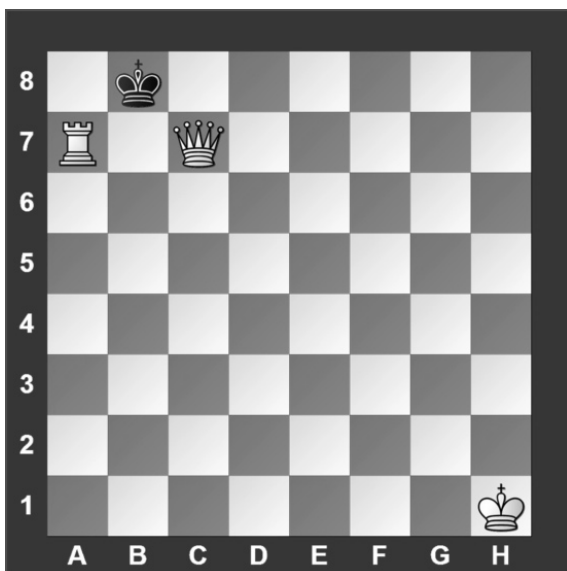
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#4.



Black just played c7 to c5. Which pawn can be captured?

- a) Black's b-pawn
- b) Black's d-pawn
- c) Black's c-pawn
- d) All of the above

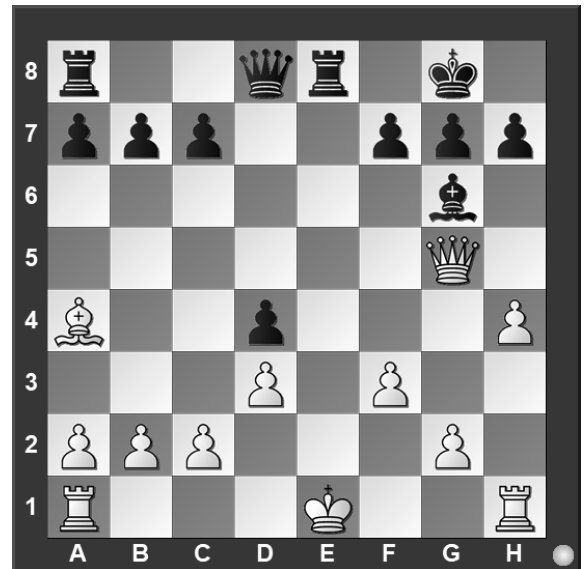
#5. White to move



Which side has material advantage?

- a) White.
- b) Black.
- c) It is even.
- d) It is not possible to tell.

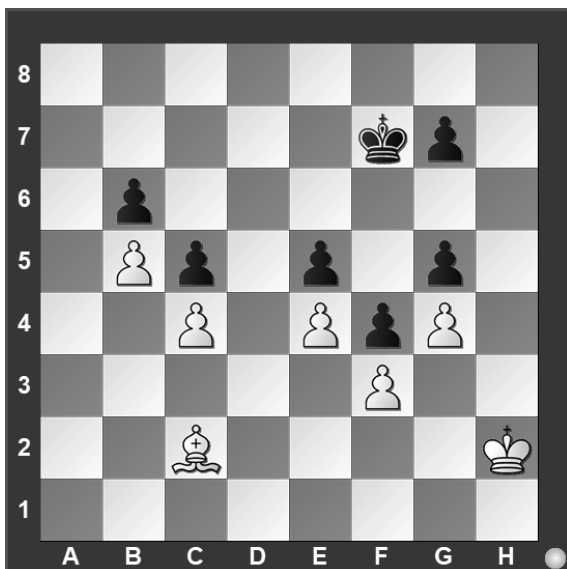
#6. White to move



Which move is possible for White?

- a) Short Castle.
- b) Long Castle.
- c) To capture the rook.
- d) To capture the queen.

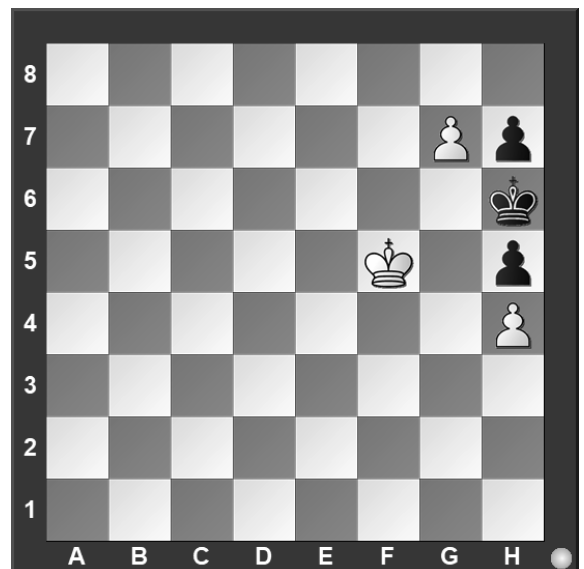
#7. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

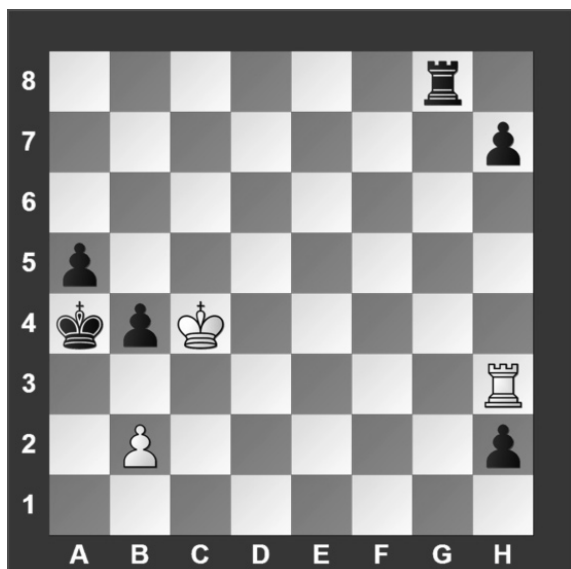
#8. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Bishop
- d) Knight

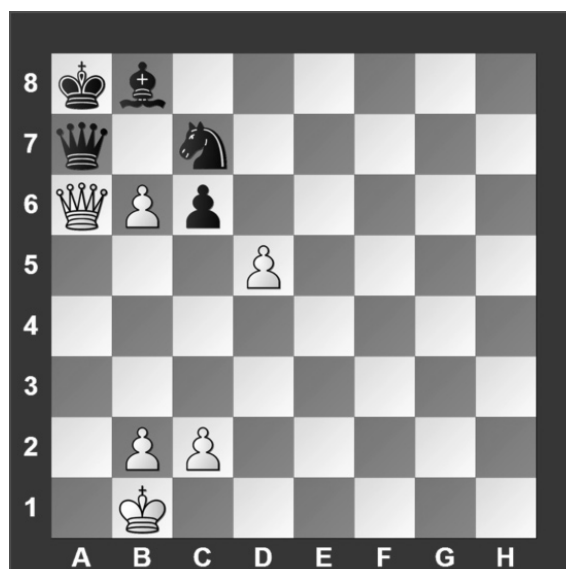
#9. White to move



White can checkmate Black in two moves, what's the *first* move?

- a) b3
- b) ♖×h7
- c) ♕a3
- d) ♖×h2

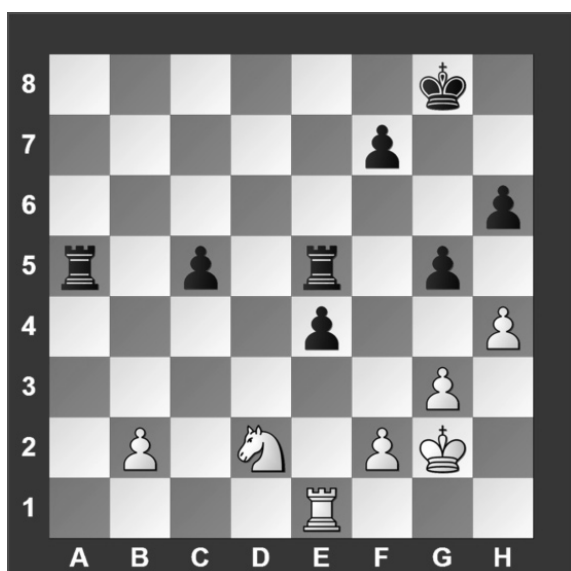
#10. White to move



What is White's best move?

- a) b×a7
- b) b×c7
- c) ♖×a7
- d) b7

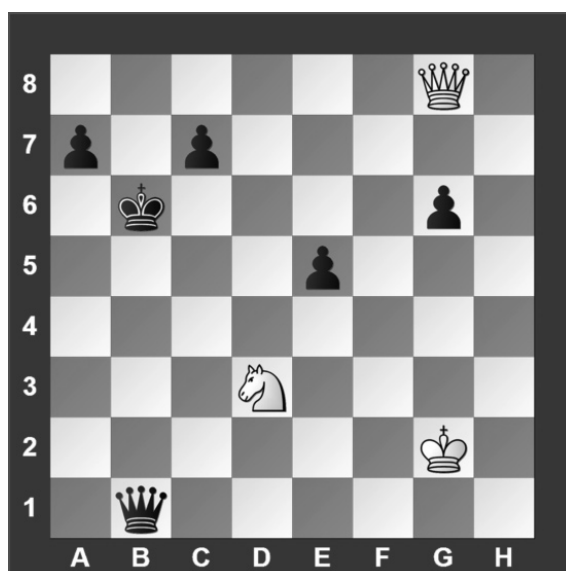
#11. White to move



What is White's best move?

- a) ♘×e4
- b) ♘c4
- c) ♖×e4
- d) ♘b3

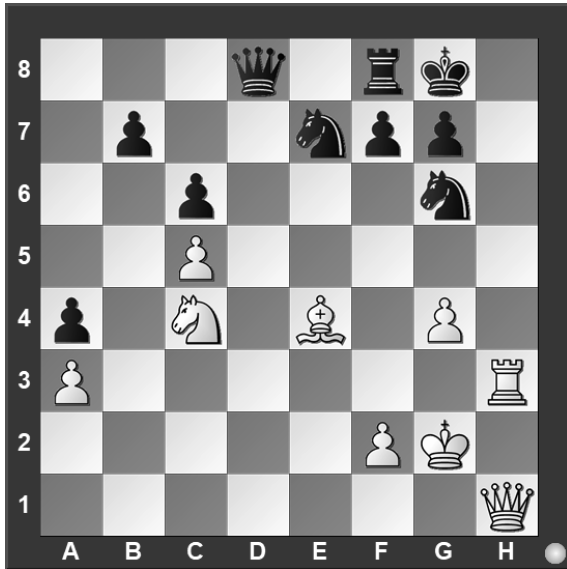
#12. White to move



What is White's best move?

- a) ♖b8
- b) ♖e6
- c) ♖×g6
- d) ♘×e5

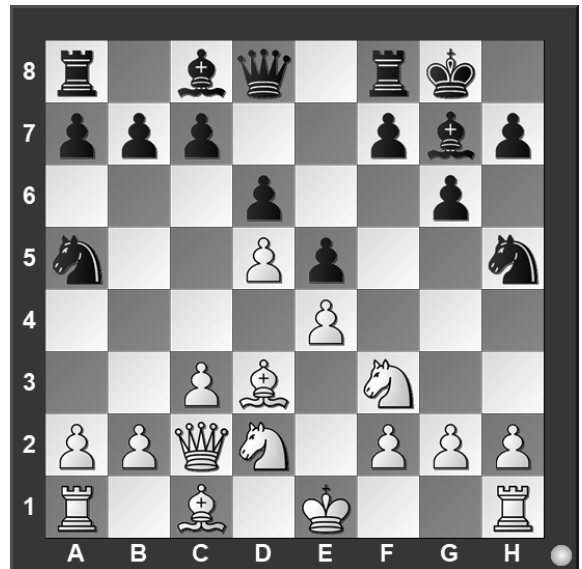
#13. White to move



If White can checkmate Black in two moves, what is the *first* move?

- a) ♖h8
- b) ♖d3
- c) ♕xg6
- d) ♘e5

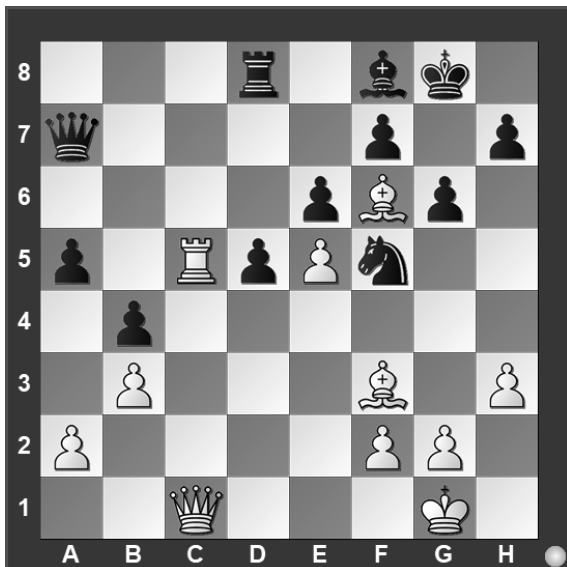
#14. White to move



What is White's best move?

- a) 0-0
- b) g3
- c) ♘c4
- d) b4

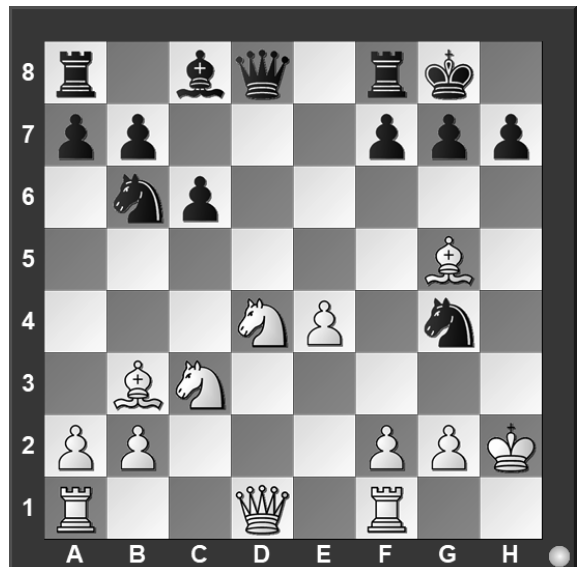
#15. White to move



What is White's best move?

- a) ♖x a5
- b) ♖c2
- c) ♕x d8
- d) ♖c7

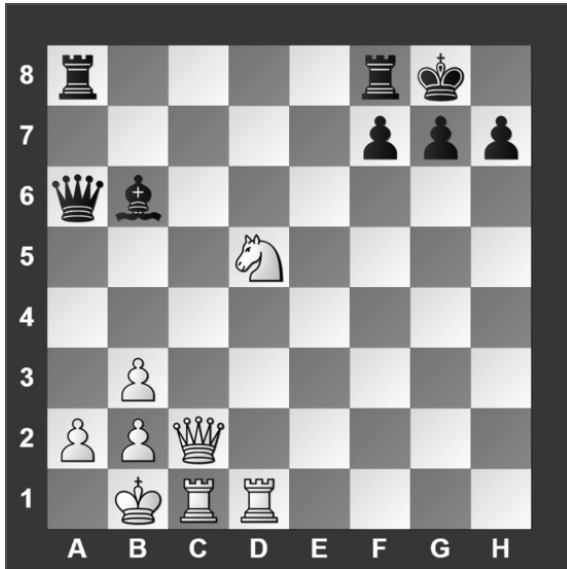
#16. White to move



What is White's best move?

- a) ♖g1
- b) ♕x d8
- c) ♖x g4
- d) ♖g3

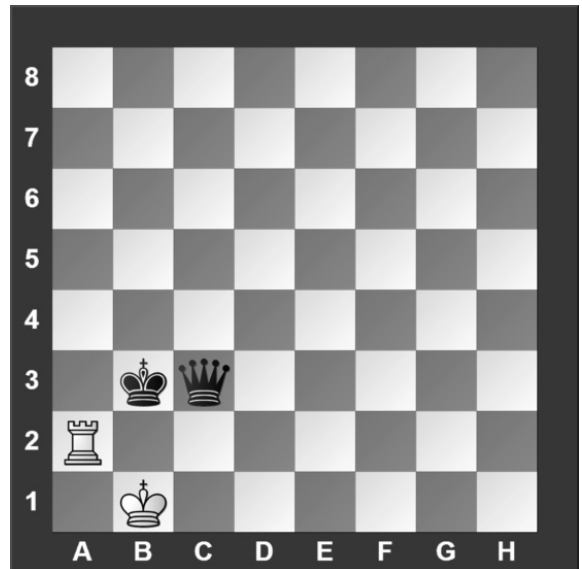
#17. White to move



White can checkmate Black in three moves, what is the *first* move?

- a) ♘e7
- b) ♙xh7
- c) ♘f6
- d) ♖g1

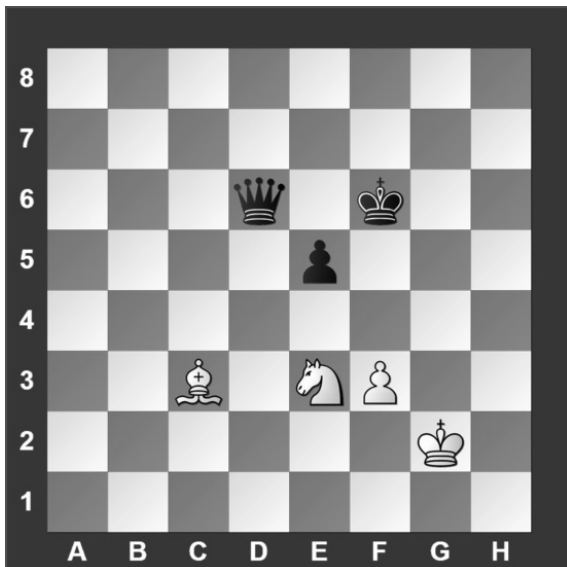
#18. White to move



What is White's best move?

- a) ♖b2
- b) ♖a8
- c) ♖a3
- d) ♖h2

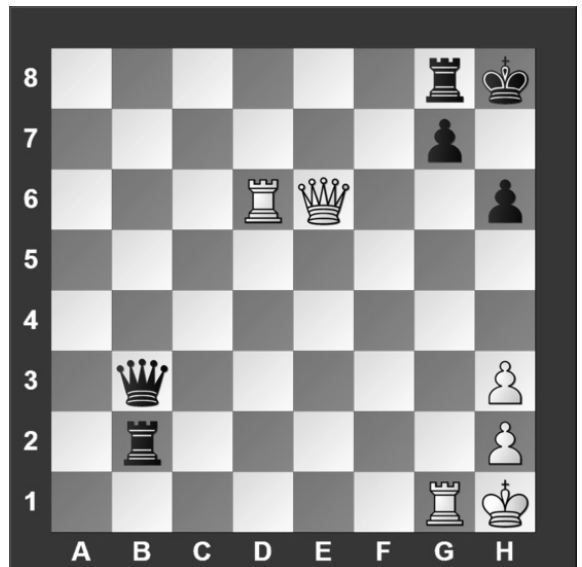
#19. White to move



What is White's best move?

- a) ♘g4
- b) ♙x e5
- c) f4
- d) ♘c4

#20. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♙xg8
- b) ♖xg7
- c) ♙xh6
- d) ♙g6



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Invitational — Grades 6, 7, and 8
ANSWER KEY**

Test

- | | | | |
|-----|---|-----|---|
| 1. | D | 11. | B |
| 2. | B | 12. | A |
| 3. | A | 13. | A |
| 4. | D | 14. | D |
| 5. | A | 15. | D |
| 6. | C | 16. | C |
| 7. | C | 17. | A |
| 8. | D | 18. | C |
| 9. | C | 19. | B |
| 10. | D | 20. | C |

Tiebreaker

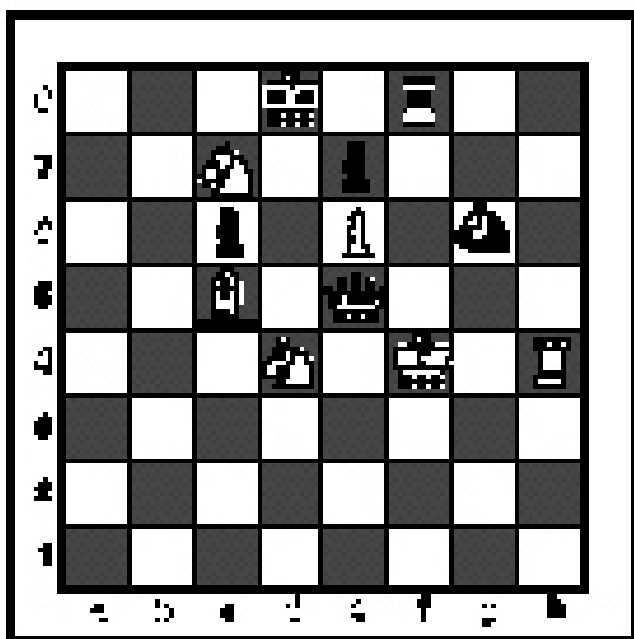
- | | | | |
|----|---|----|---|
| 1. | C | 5. | B |
| 2. | A | 6. | A |
| 3. | C | 7. | A |
| 4. | C | 8. | B |

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

TIEBREAKER - ALL GRADES

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

IMPORTANT INSTRUCTIONS:

This is the tiebreaker test for all grades for the UIL Chess Puzzle Solving Test.

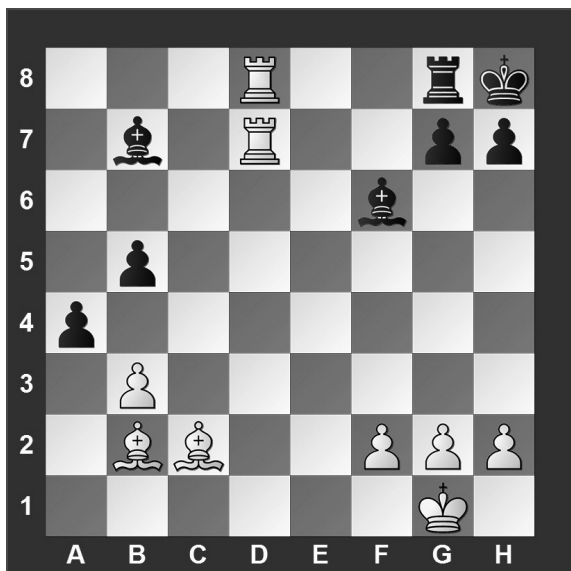
Use the separate answer sheet to write all your answers. You have five (5) minutes to take this part of the test. There are eight (8) questions. Some questions are very difficult.

As before, the symbols for check and checkmate commonly used after moves have been omitted because they would be hints.

Each correct answer earns you one point. There is no penalty for incorrect answers or unanswered questions.

These questions are hard, but the puzzles are interesting! Good luck and have fun!

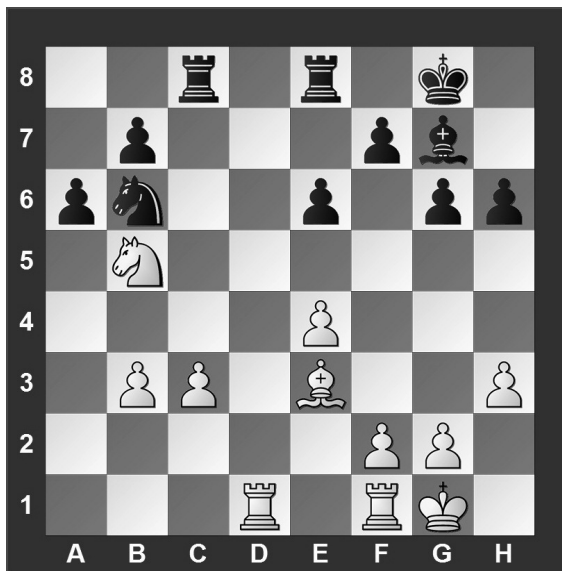
#1. White to move



If White can checkmate Black in two moves, what is White's *first* move?

- a) ♖×g8
- b) ♖×b7
- c) ♖×g7
- d) ♗×f6

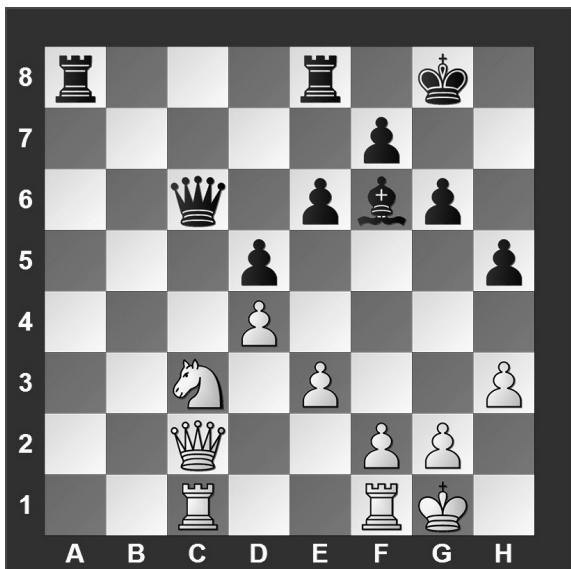
#2. White to move



What is White's best move?

- a) ♘d6
- b) ♘a7
- c) ♗×b6
- d) c4

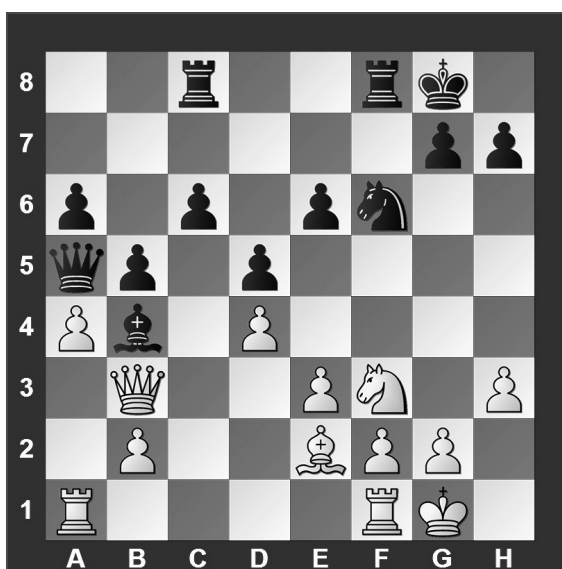
#3. White to move



What is White's best move?

- a) ♘×d5
- b) ♗×g6
- c) ♘e4
- d) e4

#4. White to move



What is White's best move?

- a) ♗×b5
- b) a×b5
- c) ♗×d5
- d) ♘e5

#5. White to move



What is White's best move?

- a) ♖f7
- b) ♖b8
- c) ♘xc5
- d) ♖f4

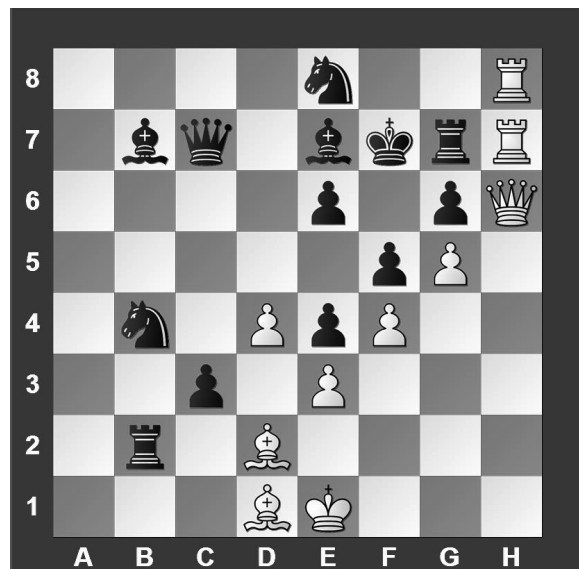
#6. White to move



What is White's best move?

- a) ♖h5
- b) ♖xh7
- c) ♖xf8
- d) ♙xg5

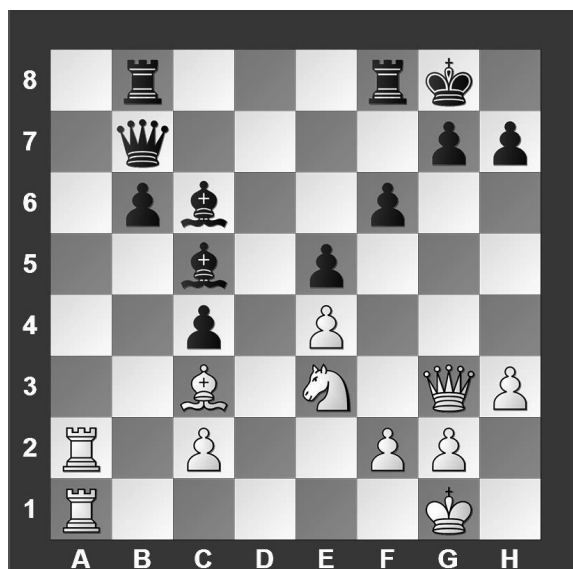
#7. White to move



If White can checkmate Black in two moves, what is White's *second* move?

- a) ♖xg7
- b) ♖xg7
- c) ♖xg6
- d) ♙h5

#8. White to move



What is White's best move?

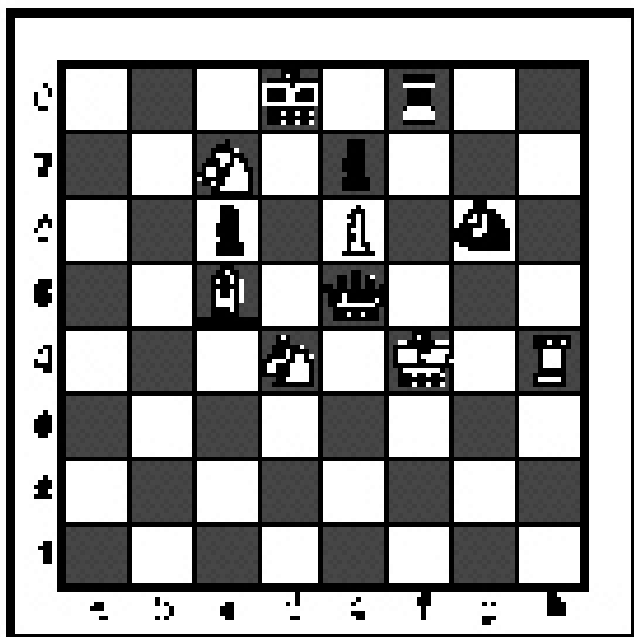
- a) ♘f5
- b) ♖xg7
- c) ♖a7
- d) ♙xe5

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 2 & 3

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

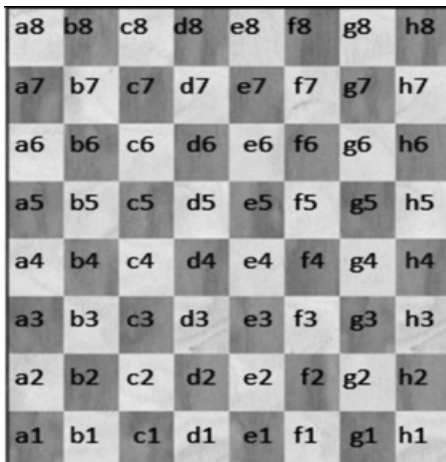
IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Test for grades two through three. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each correct answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

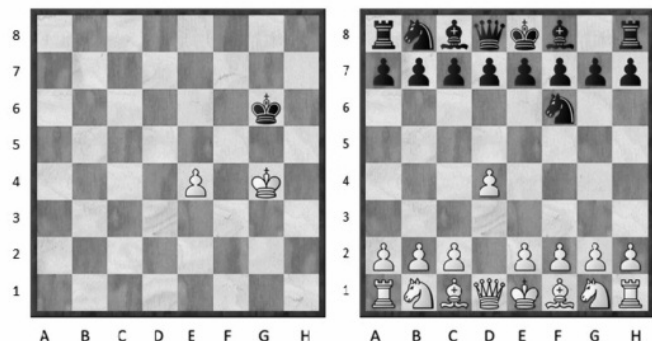
**a-h**

(We write the file it's on.)

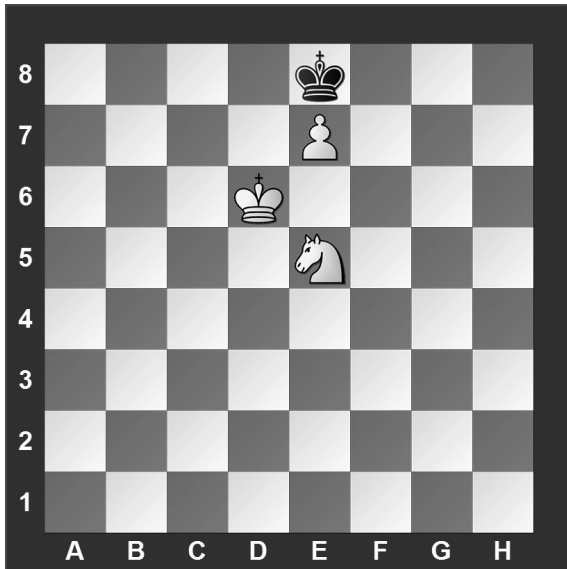
- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

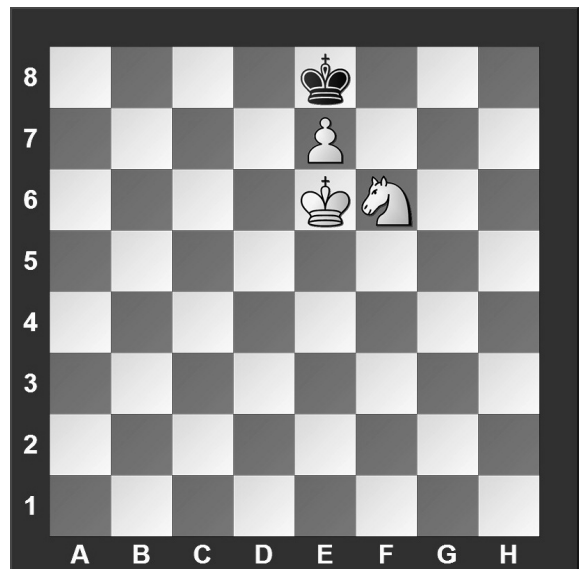
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

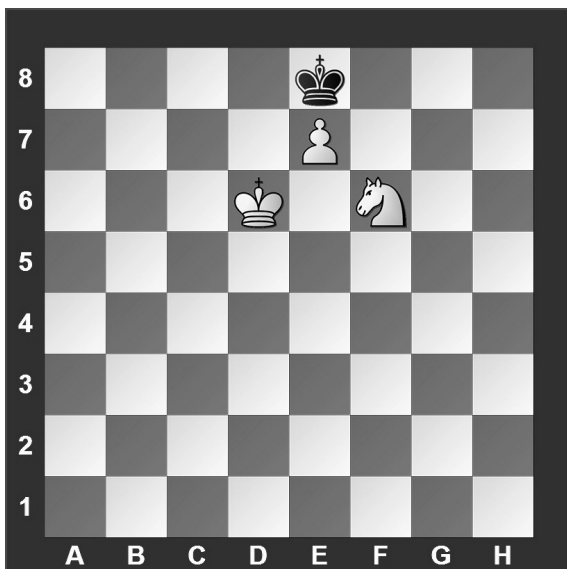
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in check.
- b) Black is in stalemate.
- c) Black is in checkmate.
- d) None of the above.

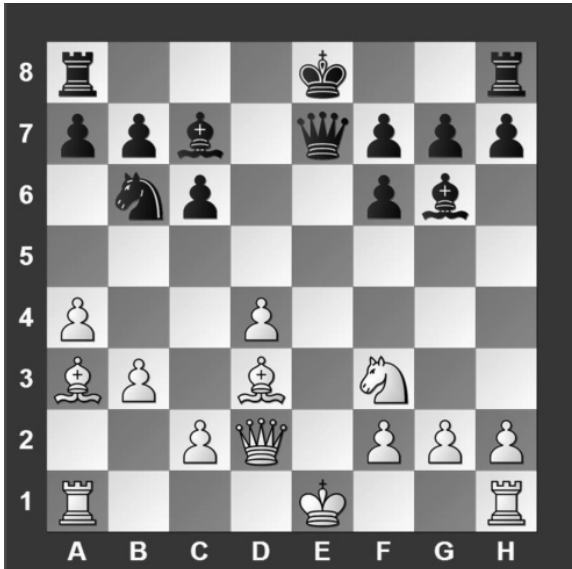
#4.



Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.

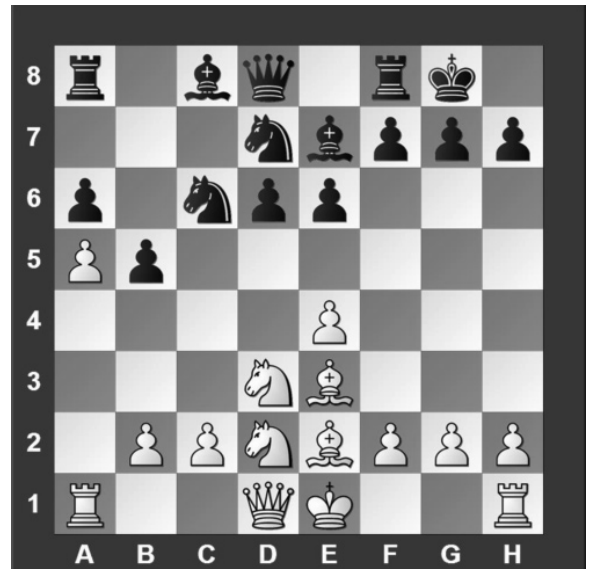
#5. White to move



Which move is possible for White?

- a) Short Castle.
- b) Long Castle.
- c) To capture Black's Bishop.
- d) To capture Black's Queen.

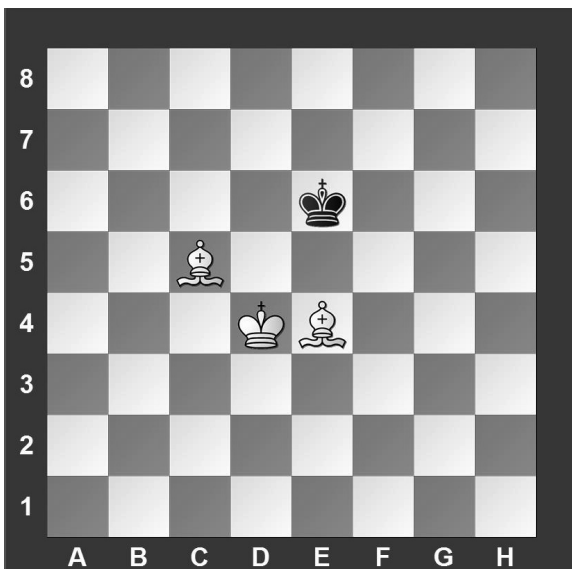
#6. White to move



Black just played b7 to b5. Which pawn can be captured?

- a) Black's c-pawn
- b) Black's b-pawn
- c) Black's f-pawn
- d) White can't capture a pawn.

#7. White to move



With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

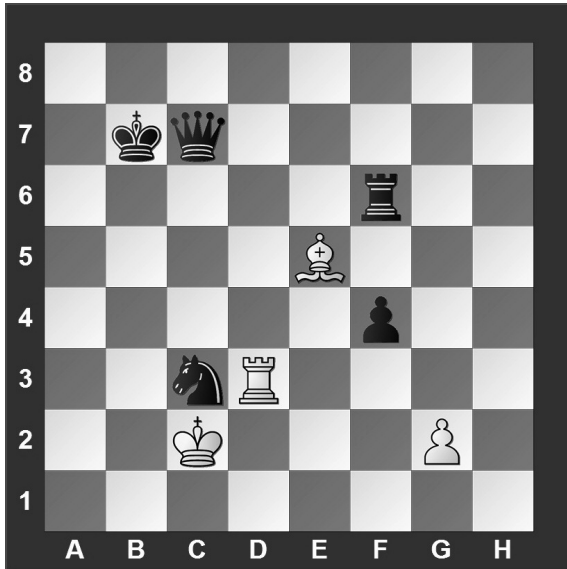
#8. White to move



What piece should White capture?

- a) Black's Queen.
- b) Black's Knight.
- c) Black's Pawn.
- d) Black's Rook.

#9. White to move



What piece should White capture?

- a) Queen
- b) Knight
- c) Rook
- d) Pawn

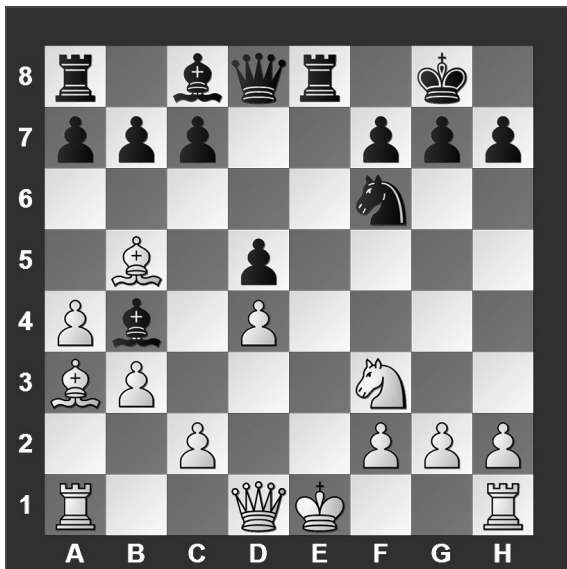
#10. White to move



What is White's best move?

- a) $\text{N} \times \text{e4}$
- b) $\text{B} \times \text{e4}$
- c) $\text{B} \times \text{c6}$
- d) $\text{Q} \text{c4}$

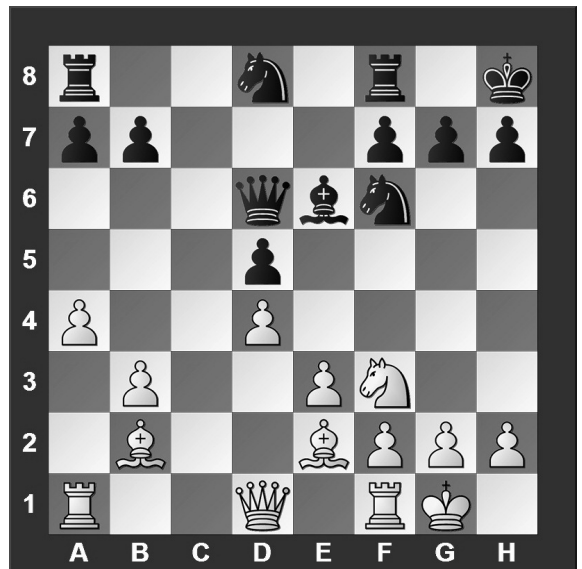
#11. White to move



Which move is possible for White?

- a) Short castle.
- b) To capture the bishop.
- c) To capture the rook.
- d) Move the king to f1.

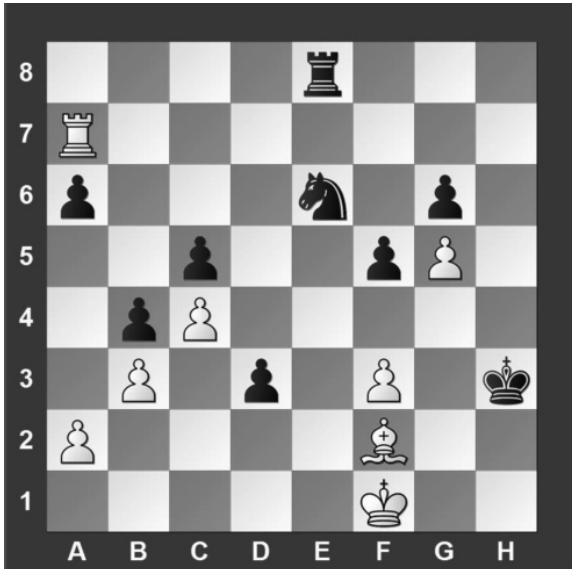
#12. White to move



What is White's best move?

- a) $\text{Q} \text{a3}$
- b) $\text{N} \text{e5}$
- c) $\text{N} \text{g5}$
- d) $\text{Q} \text{c4}$

#13. White to move



What is White's best move?

- a) ♖×a6
- b) ♜g1
- c) ♖h7
- d) f4

#14. White to move



What is White's best move?

- a) ♙c7
- b) ♜e3
- c) ♙d4
- d) ♖c6

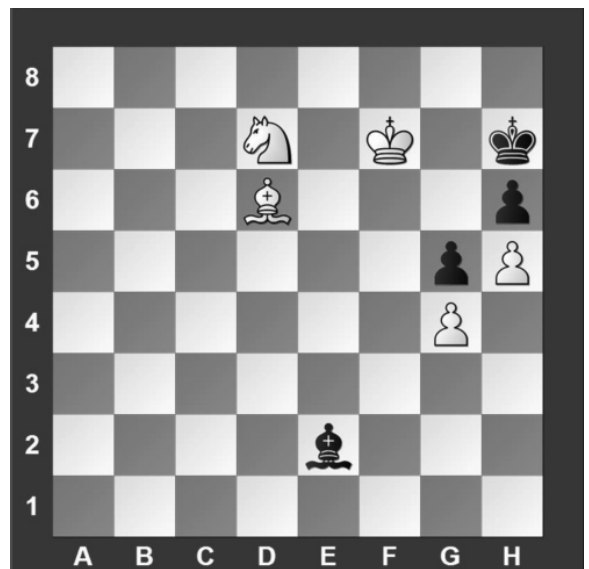
#15. White to move



What is White's best move?

- a) ♘×d6
- b) ♜×d6
- c) c4
- d) ♘c7

#16. White to move



If White can checkmate Black in two moves, what is the *first* move?

- a) ♙c5
- b) ♘f8
- c) ♘f6
- d) ♙f8



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Fall/Winter — Grades 2 & 3**

ANSWER KEY

Test

- | | | | |
|----|---|-----|---|
| 1. | B | 9. | A |
| 2. | A | 10. | D |
| 3. | A | 11. | D |
| 4. | B | 12. | A |
| 5. | D | 13. | C |
| 6. | B | 14. | A |
| 7. | A | 15. | D |
| 8. | A | 16. | B |

Tiebreaker

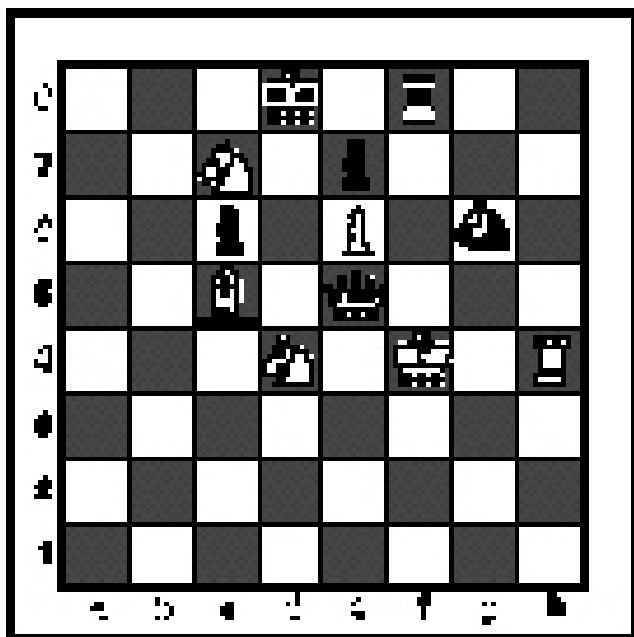
- | | | | |
|----|---|----|---|
| 1. | D | 5. | A |
| 2. | A | 6. | B |
| 3. | C | 7. | D |
| 4. | B | 8. | C |

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 4 & 5

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

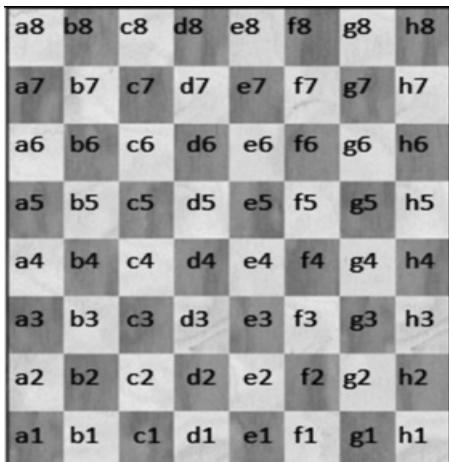
IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Test for grades four through five. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each correct answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

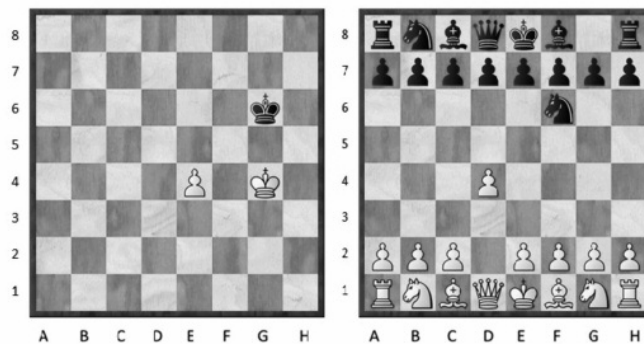
**a-h**

(We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

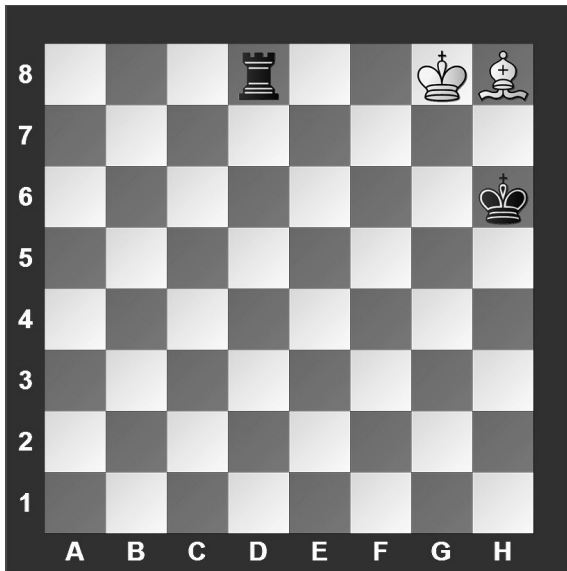
If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.



White has just played **e4**.

Black has just played ... **Nf6**.

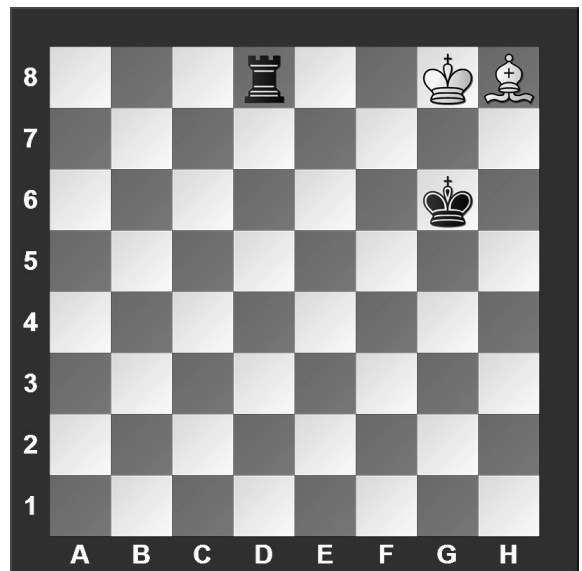
#1. White to move



What term best describes this situation?

- a) White is in checkmate.
- b) White is in stalemate.
- c) White is in check.
- d) None of the above.

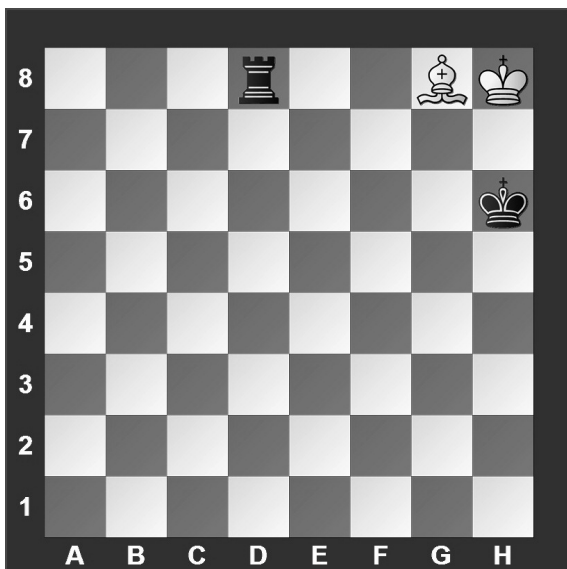
#2. White to move



What term best describes this situation?

- a) White is in checkmate.
- b) White is in stalemate.
- c) White is in check.
- d) None of the above.

#3. White to move



What term best describes this situation?

- a) White is in checkmate.
- b) White is in stalemate.
- c) White is in check.
- d) None of the above.

#4.



Which side has material advantage?

- a) White
- b) It is even.
- c) Black
- d) It is not possible to tell.

#5.



Which side has material advantage?

- a) White
- b) It is even.
- c) Black
- d) It is not possible to tell.

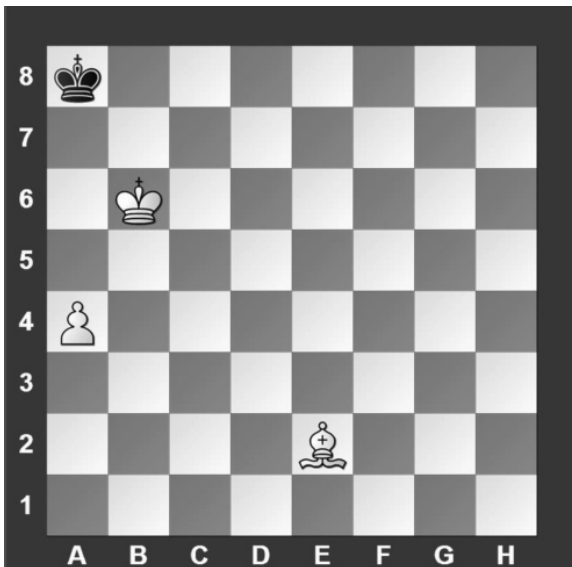
#6. White to move



What piece should White capture?

- a) Black's Rook
- b) Black's Bishop
- c) Black's Pawn
- d) Black's Knight

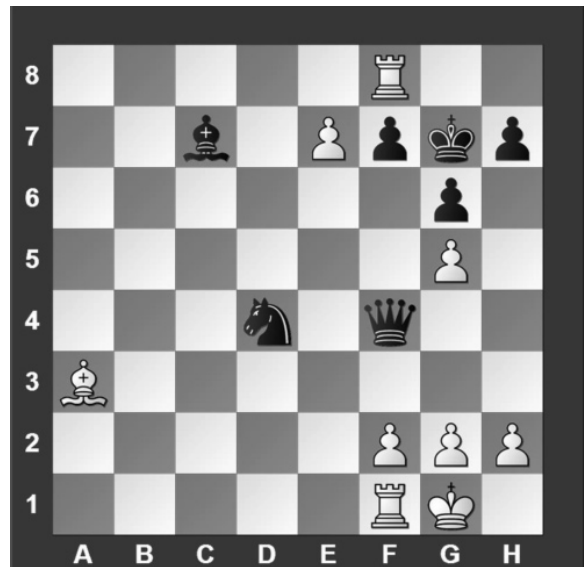
#7. White to move



With the best play, what is the outcome of the game?

- a) White wins
- b) Black wins
- c) Draw
- d) Impossible to tell

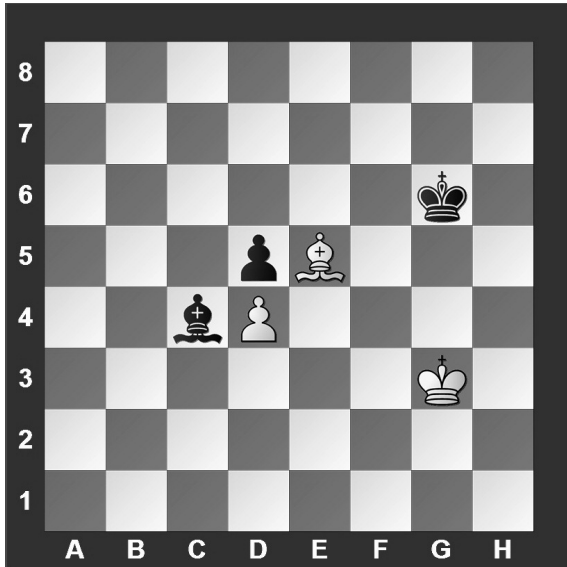
#8. White to move



What is the best move?

- a) Promote to a Queen
- b) Promote to a Rook
- c) Promote to a Knight
- d) Promote to a Bishop

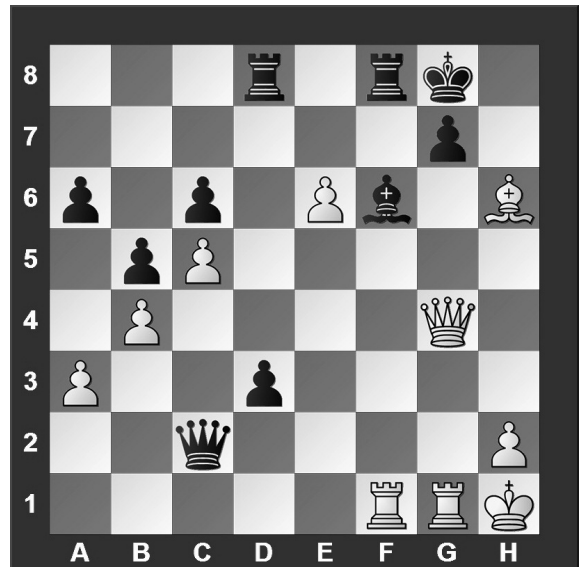
#9. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

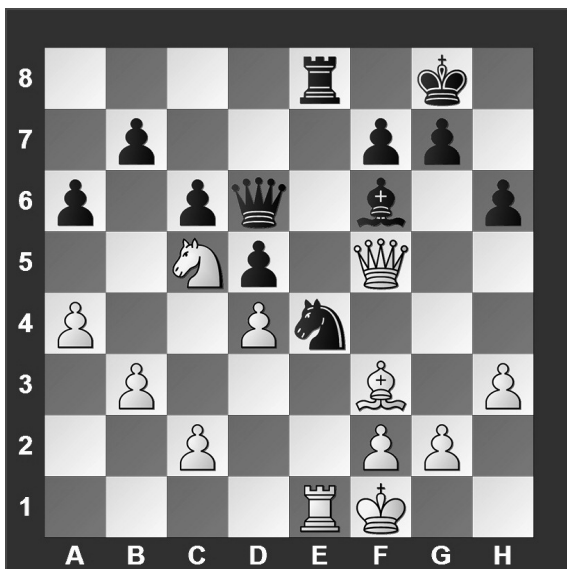
#10. White to move



What is White's best move?

- a) ♔×g7
- b) ♖×f6
- c) ♖f2
- d) ♔c4

#11. White to move



What is White's best move?

- a) ♘×e4
- b) ♖×e4
- c) ♙×e4
- d) ♔×e4

#12. White to move



What is White's best move?

- a) ♔×b7
- b) ♖×c6
- c) ♙×d5
- d) ♔e1

#13. White to move



White can checkmate Black in two moves, what is the *first* move?

- a) ♔g4
- b) ♖h8
- c) ♖×e5
- d) ♔h5

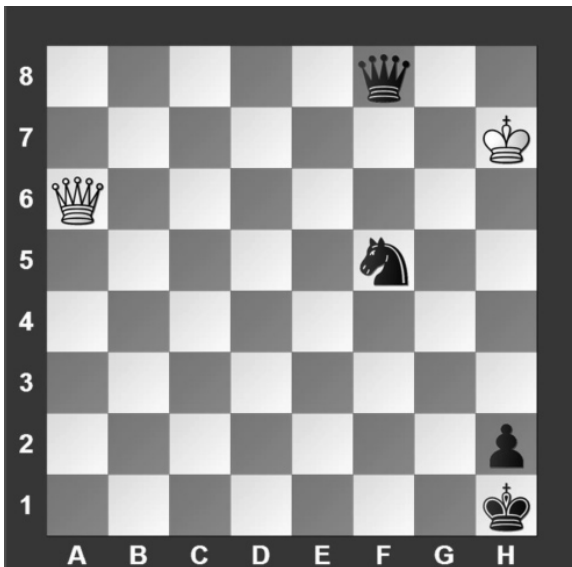
#14. White to move



What is White's best move?

- a) ♔×g4
- b) ♖h6
- c) ♖e5
- d) ♖h6

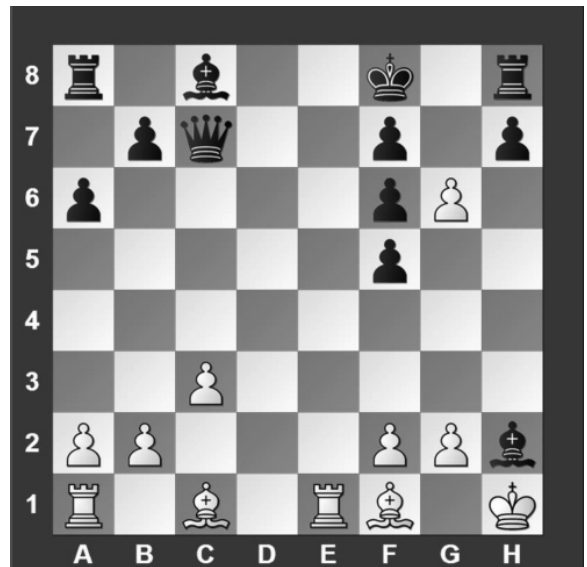
#15. White to move



What is White's best move?

- a) ♔f1
- b) ♔f6
- c) ♔a1
- d) ♔h6

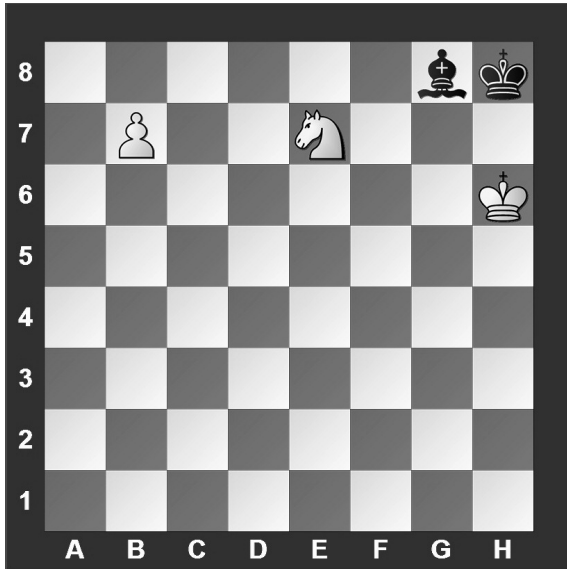
#16. White to move



White can checkmate Black in two moves, what is the *second* move?

- a) ♖e8
- b) ♖×f7
- c) ♖×h7
- d) ♖g7

#17. White to move



What piece should White promote to?

- a) Rook.
- b) Queen.
- c) Bishop.
- d) Knight.

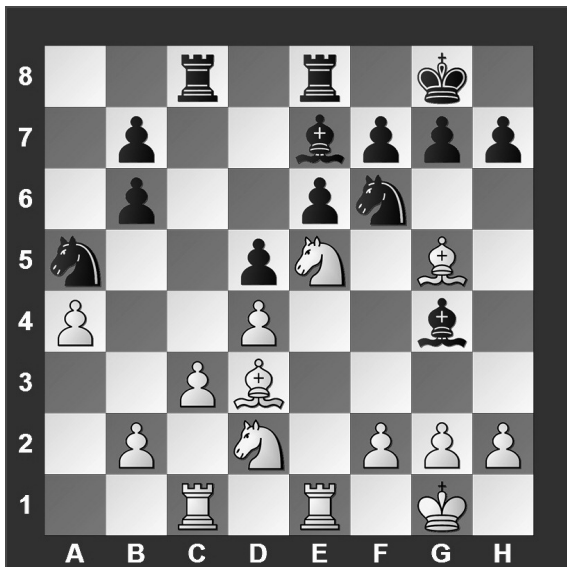
#18. White to move



What is White's best move?

- a) ♖xg6
- b) ♖h5
- c) ♙xg2
- d) ♖xg1

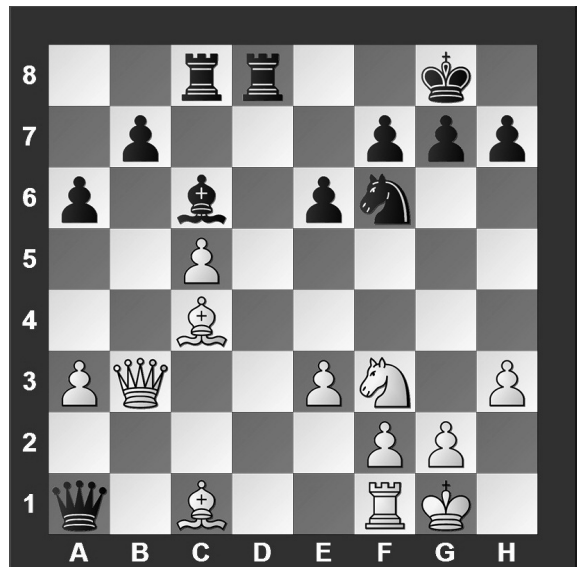
#19. White to move



What is White's best move?

- a) ♖xg4
- b) ♙xh7
- c) ♙xf6
- d) h3

#20. White to move



What is White's best move?

- a) ♙b2
- b) ♖b2
- c) ♙xe6
- d) ♖e5



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Fall/Winter — Grades 4 & 5**

ANSWER KEY

Test

- | | | | |
|-----|---|-----|---|
| 1. | C | 11. | C |
| 2. | A | 12. | C |
| 3. | B | 13. | D |
| 4. | A | 14. | B |
| 5. | A | 15. | A |
| 6. | A | 16. | A |
| 7. | A | 17. | C |
| 8. | C | 18. | B |
| 9. | C | 19. | C |
| 10. | B | 20. | A |

Tiebreaker

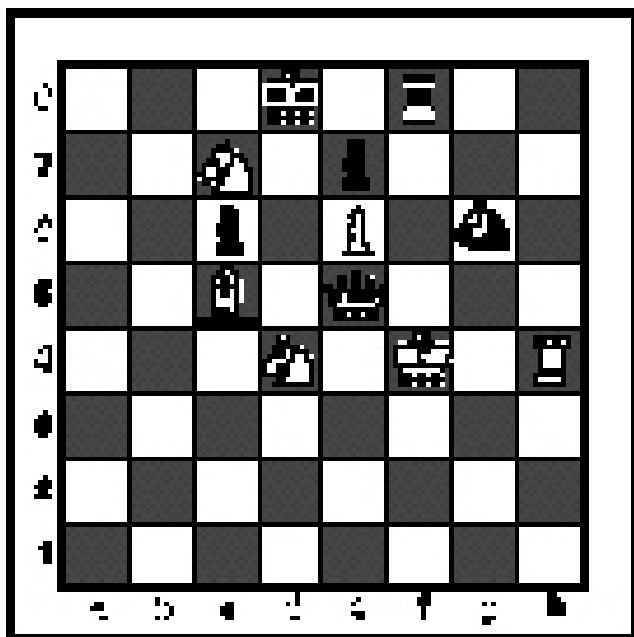
- | | | | |
|----|---|----|---|
| 1. | D | 5. | A |
| 2. | A | 6. | B |
| 3. | C | 7. | D |
| 4. | B | 8. | C |

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 6, 7, 8

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

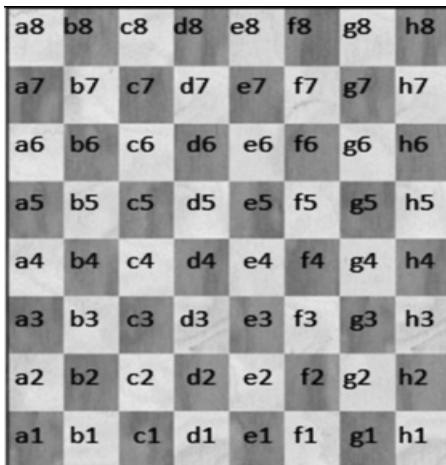
IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Test for grades six through eight. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each correct answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

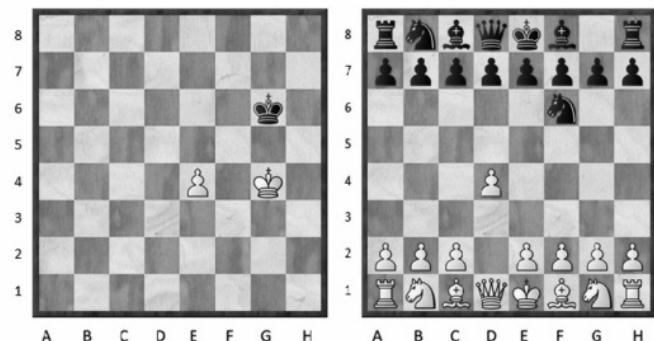
**a-h**

(We write the file it's on.)

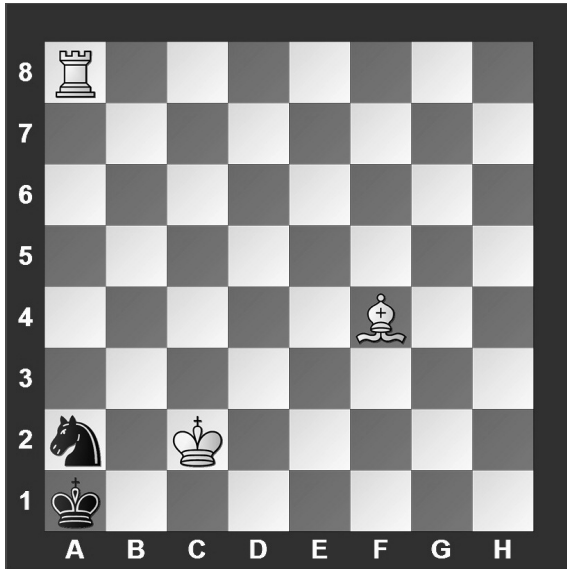
- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

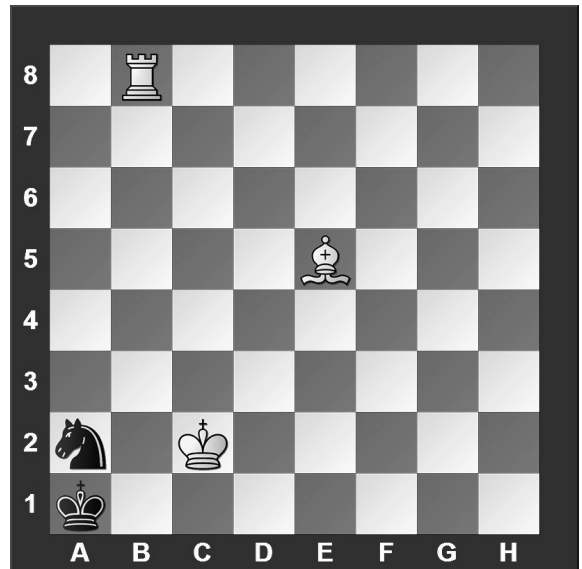
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

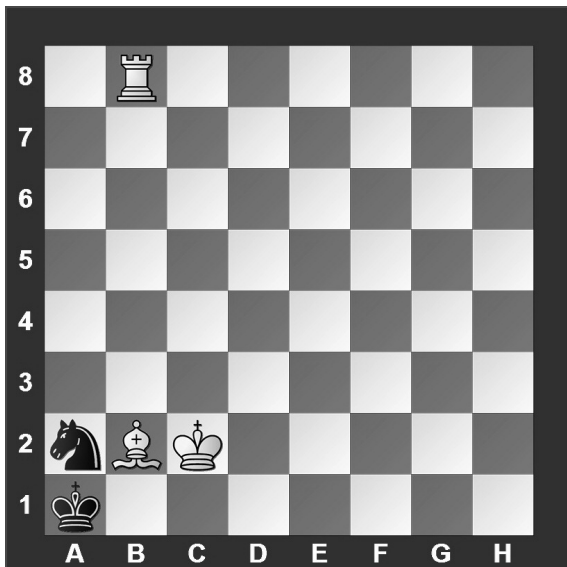
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

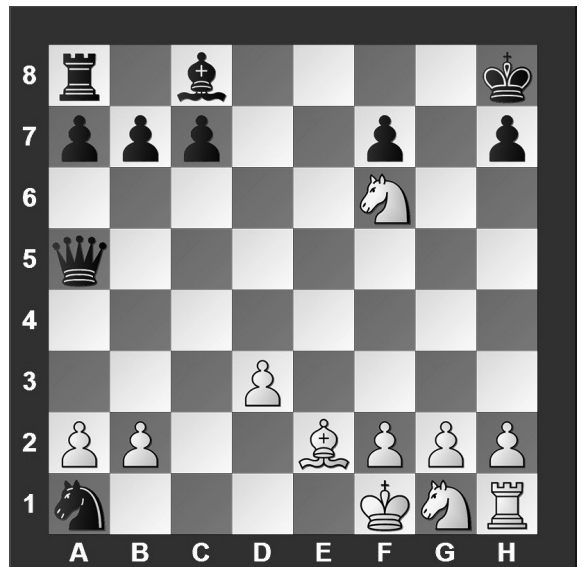
#3 Black to move.



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#4.



Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.

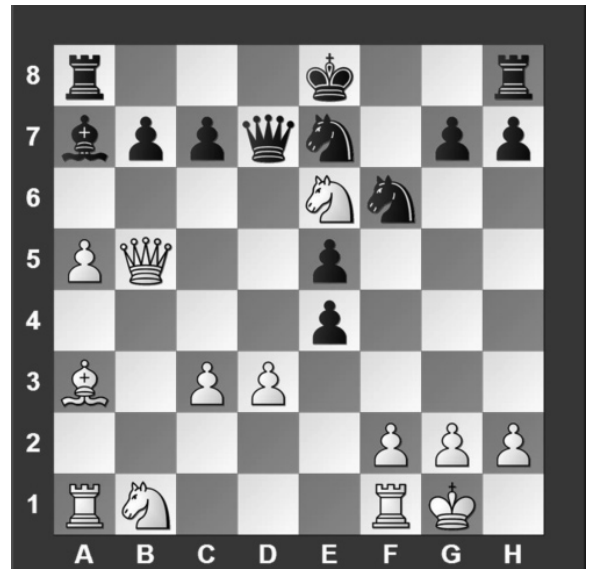
#5.



Which side has material advantage?

- a) White
- b) It is even.
- c) Black
- d) It is not possible to tell.

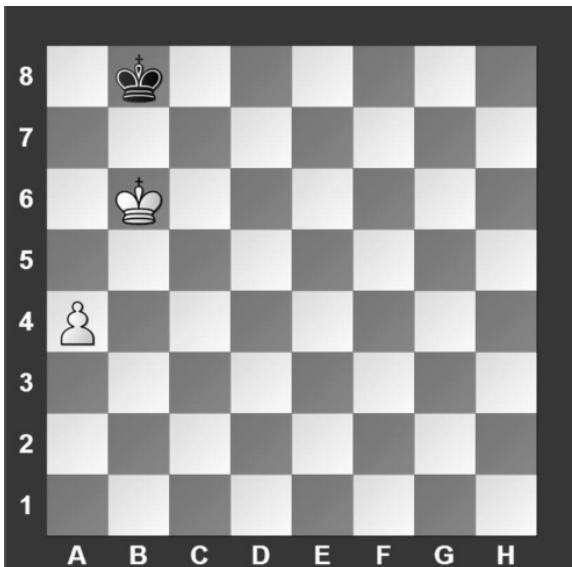
#6. Black to move



Which move is possible for Black?

- a) Short Castle.
- b) Long Castle.
- c) Take White's Queen
- d) Take White's Knight

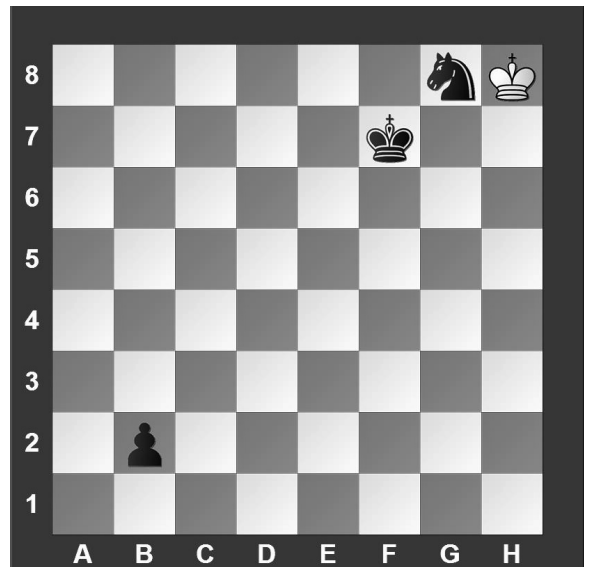
#7. White to move



With the best play, what is the outcome of the game?

- a) White wins
- b) Black wins
- c) Draw
- d) Impossible to tell

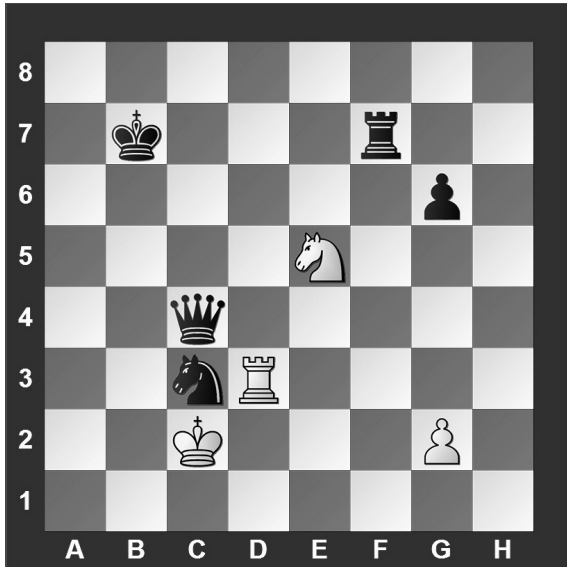
#8. Black to move



What is the best move?

- a) Promote to a Queen
- b) Promote to a Rook
- c) Promote to a Knight
- d) Promote to a Bishop

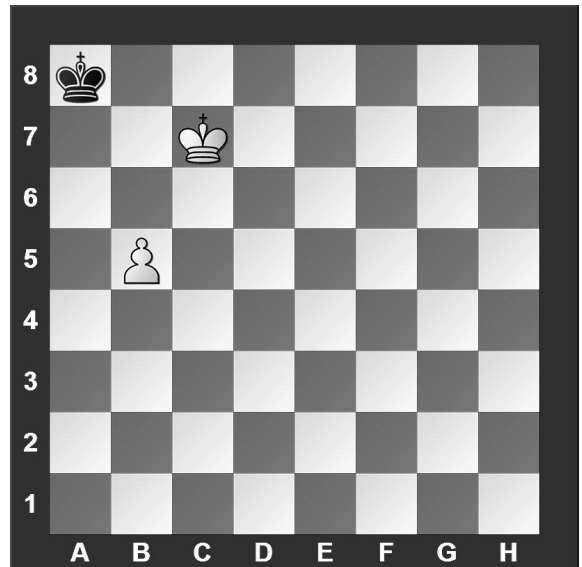
#9. White to move



What piece should White capture?

- a) Queen.
- b) Rook.
- c) Knight.
- d) Pawn.

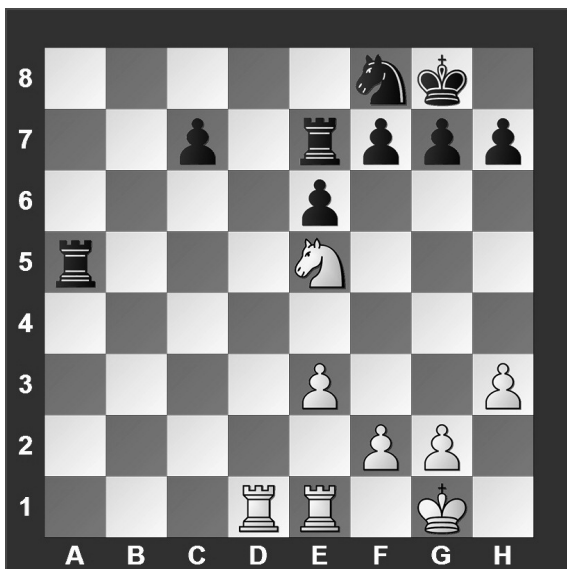
#10. White to move



What is White's best move?

- a) ♖b6
- b) b6
- c) ♖d8
- d) ♖d7

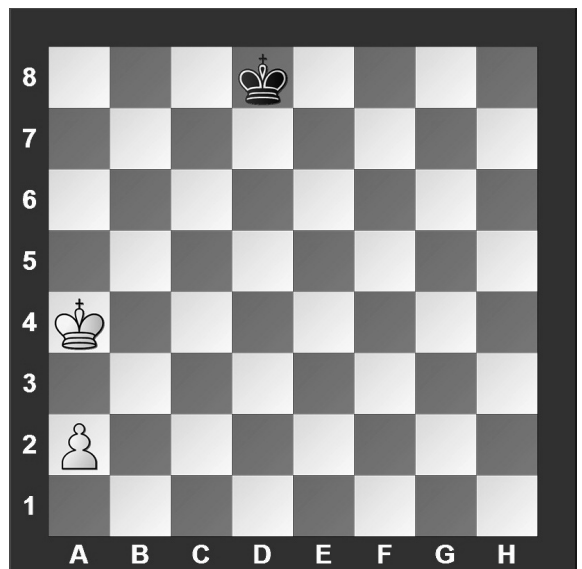
#11. White to move



What is White's best move?

- a) ♖xg7
- b) ♖g6
- c) ♖d8
- d) ♖c6

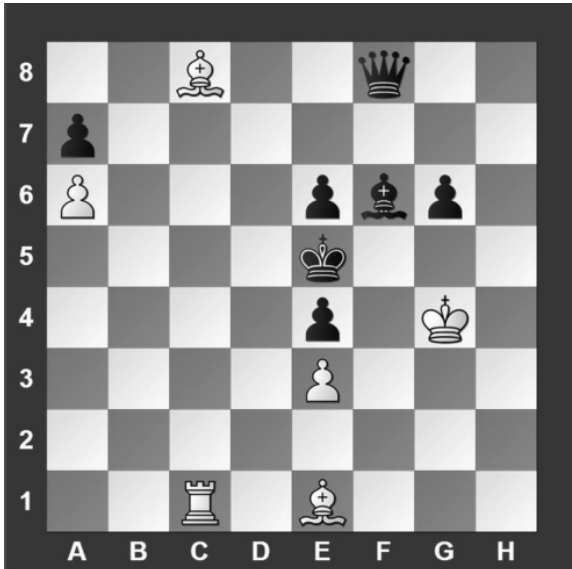
#12. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

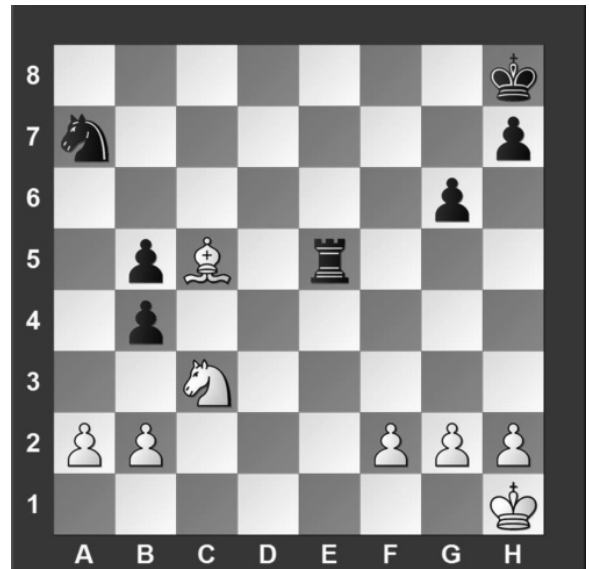
#13. White to move



White can checkmate Black in two moves, what is the *first* move?

- a) ♔c3
- b) ♔g3
- c) ♖c5
- d) ♔x e6

#14. White to move



What is White's best move?

- a) ♔d4
- b) ♔x a7
- c) ♔x b4
- d) ♔e2

#15. White to move



What is White's best move?

- a) fxe7
- b) ♔xc7
- c) f7
- d) gxf4

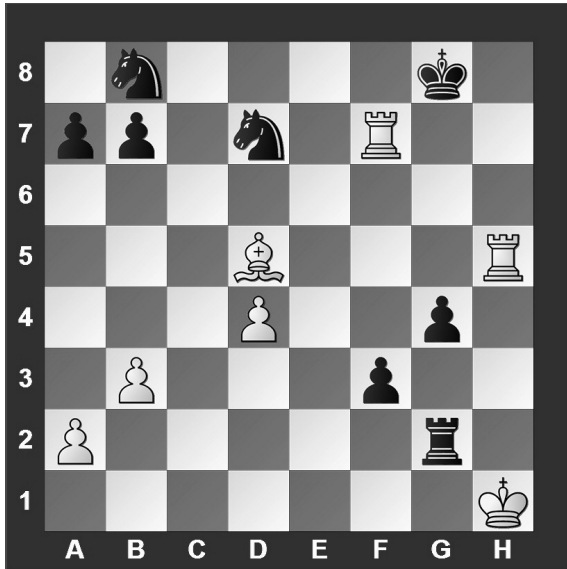
#16. White to move



White can checkmate Black in two moves, what is the *second* move?

- a) ♔f7
- b) c3
- c) ♔e2
- d) ♔g6

#17. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♖h8
- b) ♖f8
- c) ♖×d7
- d) ♗×f3

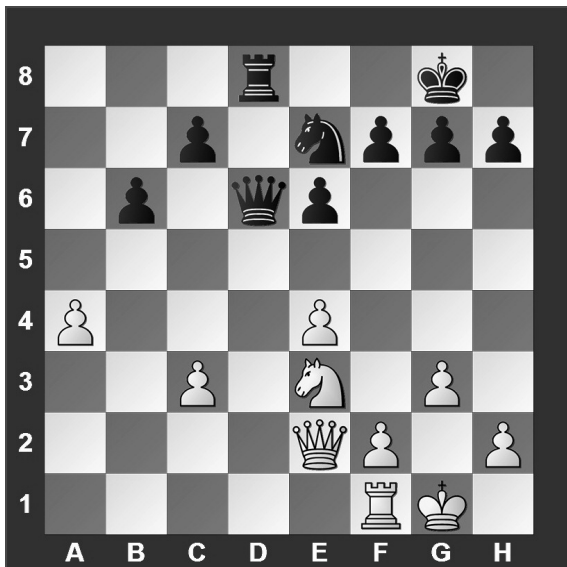
#18. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♖h3
- b) ♖g4
- c) ♗g5
- d) ♖×d5

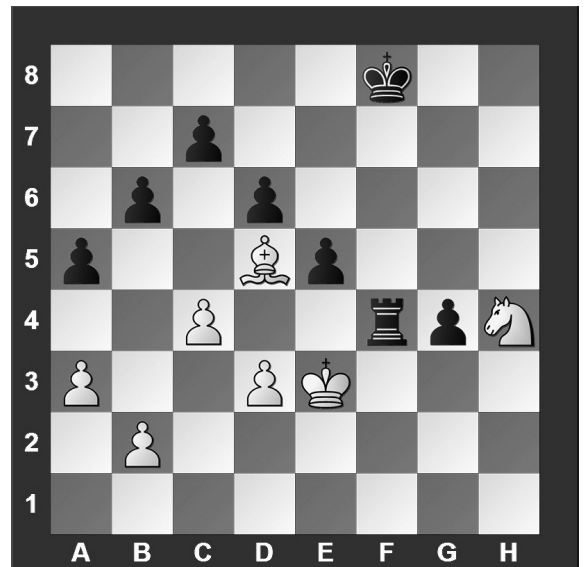
#19. White to move



What is White's best move?

- a) e5
- b) ♗c4
- c) ♖d1
- d) ♖g2

#20. White to move



What is White's best move?

- a) ♗g6
- b) ♗g2
- c) ♗f3
- d) ♖e2



University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Fall/Winter — Grades 6, 7, and 8
ANSWER KEY

Test

- | | |
|-------|-------|
| 1. B | 11. D |
| 2. C | 12. C |
| 3. A | 13. B |
| 4. B | 14. A |
| 5. C | 15. C |
| 6. C | 16. D |
| 7. C | 17. C |
| 8. B | 18. C |
| 9. A | 19. C |
| 10. A | 20. A |

Tiebreaker

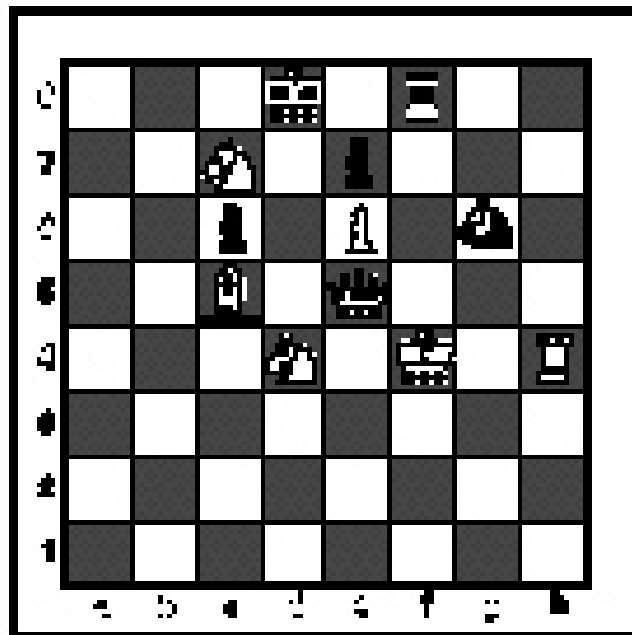
- | | |
|------|------|
| 1. D | 5. A |
| 2. A | 6. B |
| 3. C | 7. D |
| 4. B | 8. C |

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League

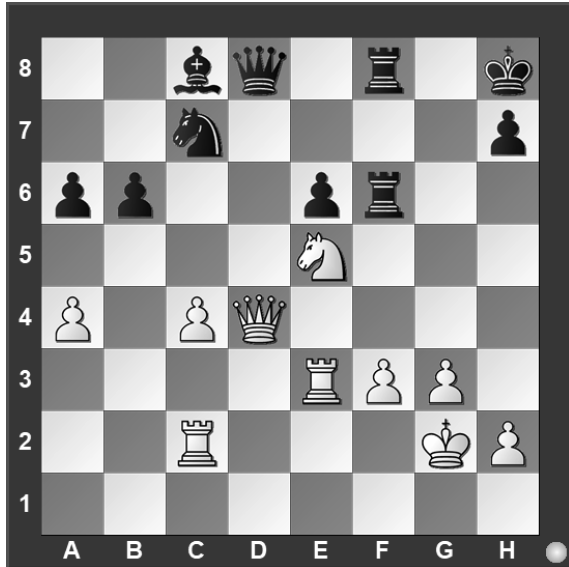


Chess Puzzle Solving

TIEBREAKER - ALL GRADES

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

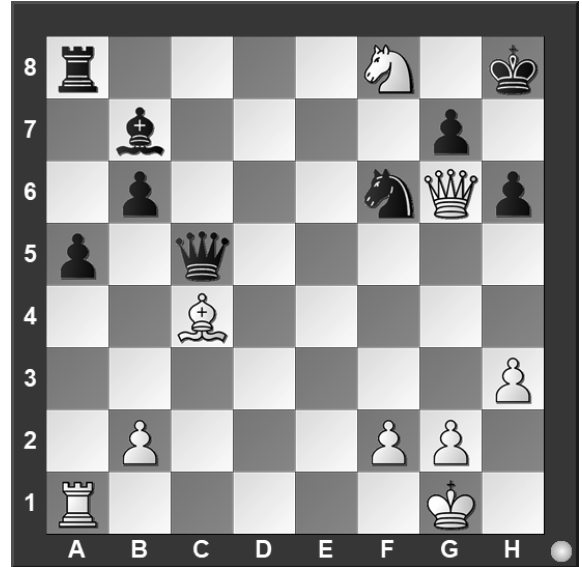
#1. White to move



What is White's best move?

- a) ♔b2
- b) ♘f7
- c) ♔×b6
- d) ♔×d8

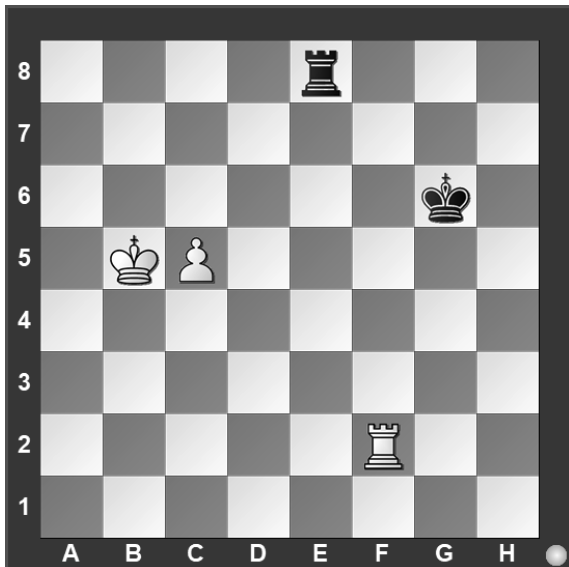
#2. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♘e6
- b) ♔×g7
- c) ♔h7
- d) ♘d3

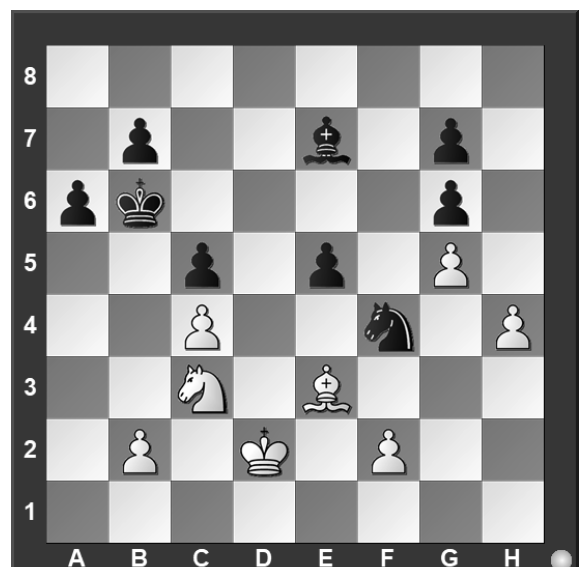
#3. White to move



With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

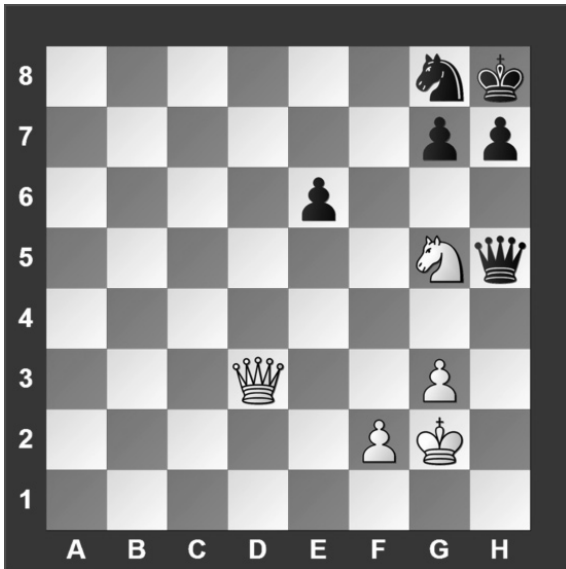
#4. White to move



What is White's best move?

- a) ♘×f4
- b) ♘d5
- c) ♘a4
- d) ♘e4

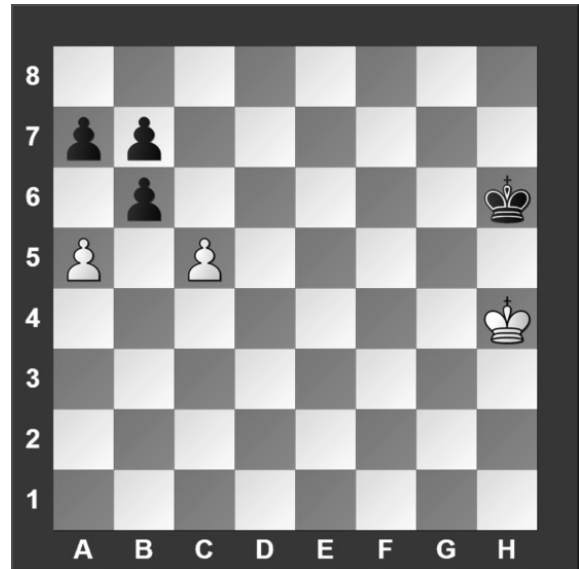
#5. White to move



If White can checkmate Black in two moves, what is White's *first* move?

- a) ♔xh7
- b) ♘f7
- c) ♘x e6
- d) White can't checkmate Black in two moves.

#6. White to move



What is White's best move?

- a) c6
- b) cxb6
- c) axb6
- d) a6

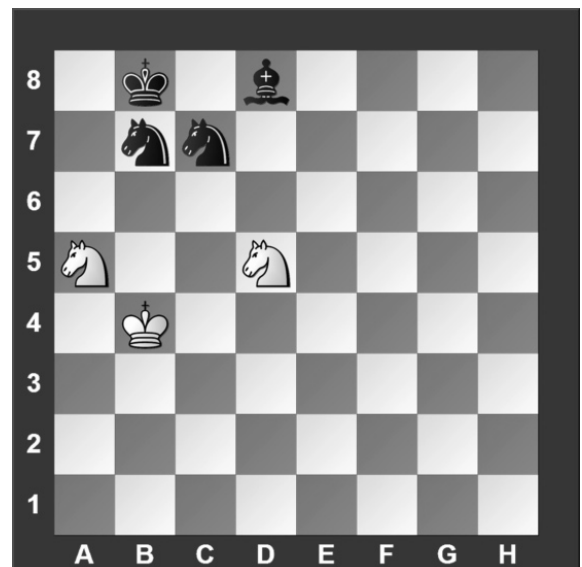
#7. White to move



If White can checkmate Black in two moves, what is White's *second* move?

- a) ♔xb7
- b) ♖c7
- c) ♖xc8
- d) ♘xb7

#8. White to move



With the best play, what is the outcome of the game?

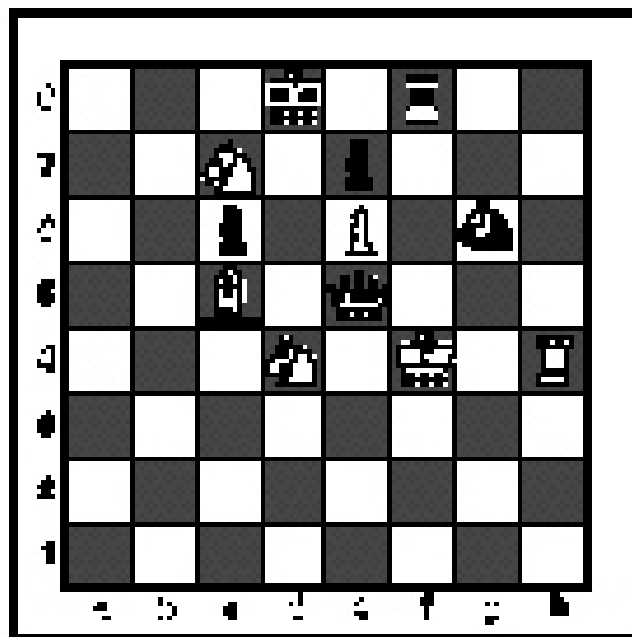
- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 2 & 3

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

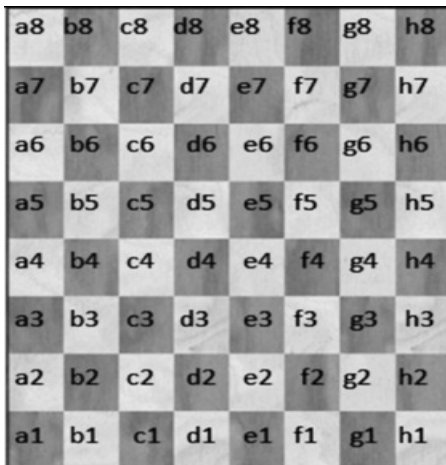
IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Invitational Test for grades two and three. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each correct answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

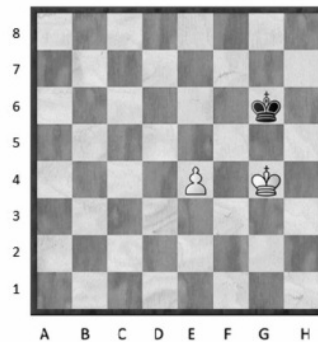
**a-h**

(We write the file it's on.)

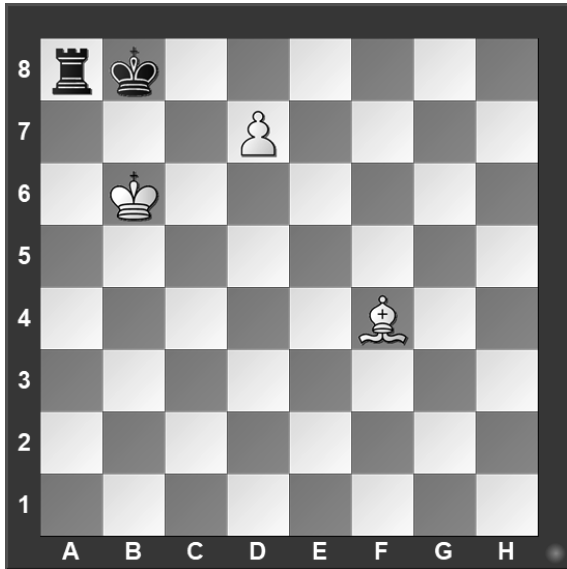
- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

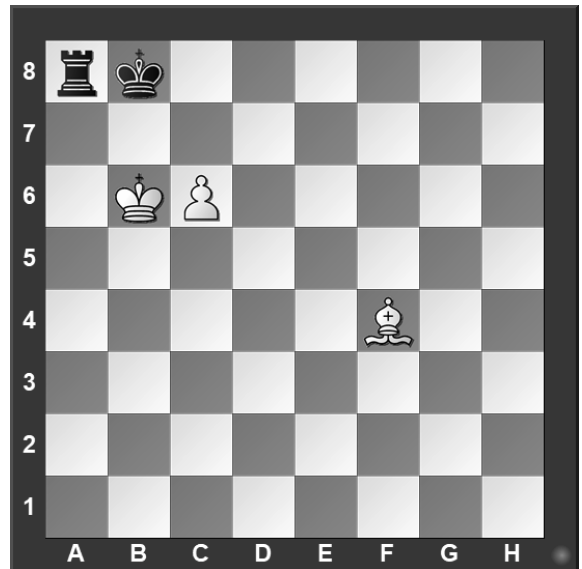
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

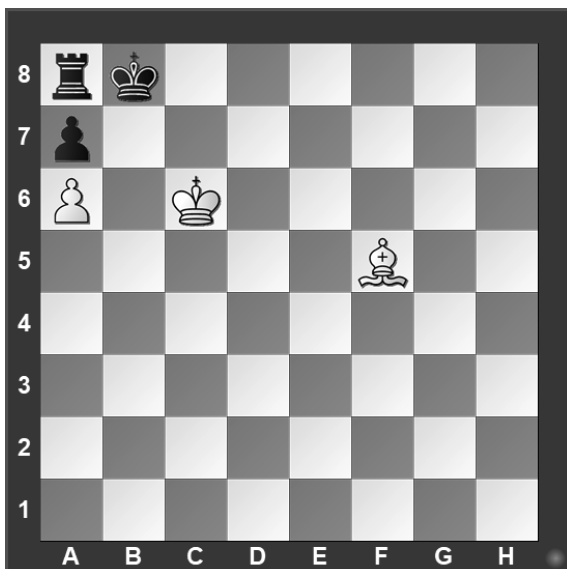
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

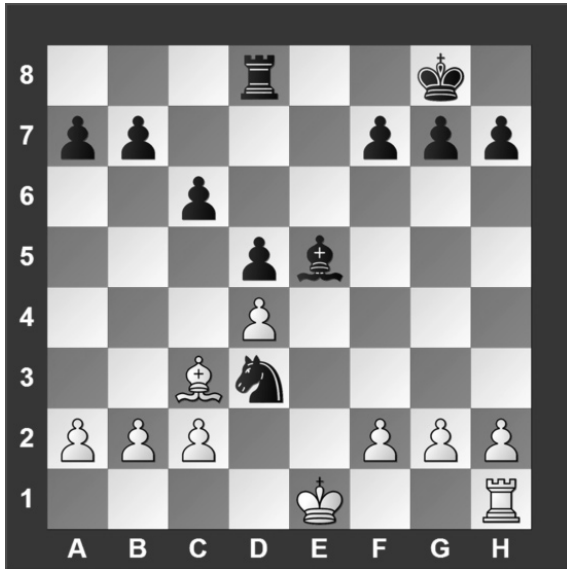
#4. White to move



Which side has material advantage?

- a) White.
- b) Black.
- c) It's even.
- d) It's not possible to tell.

#5. White to move



Which move is possible for White?

- a) Short Castle.
- b) Long Castle.
- c) To capture the bishop.
- d) To capture the knight.

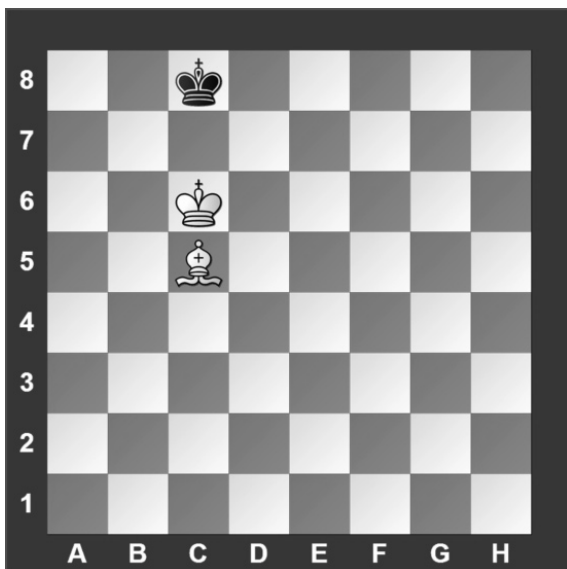
#6. White to move



Black just played d7 to d5. Which pawn can be captured?

- a) Black's c-pawn
- b) Black's d-pawn
- c) Black's f-pawn
- d) White can't capture a pawn.

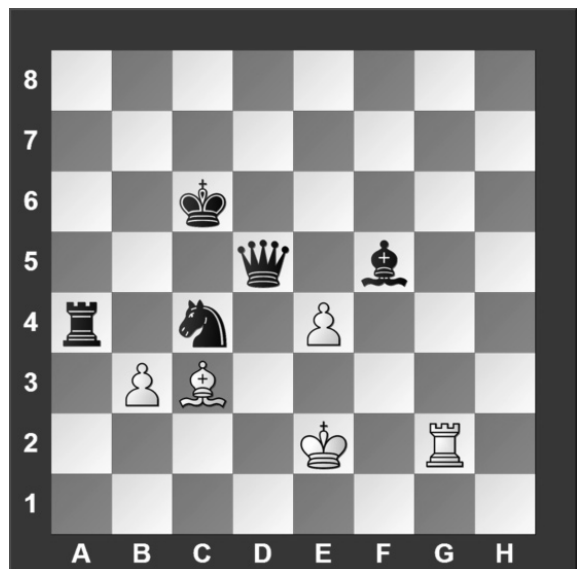
#7. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

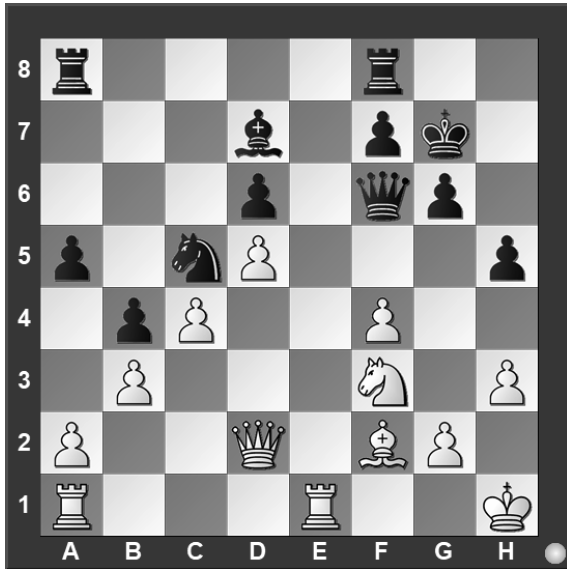
#8. White to move



What piece should white capture?

- a) Black's queen.
- b) Black's knight.
- c) Black's bishop.
- d) Black's rook.

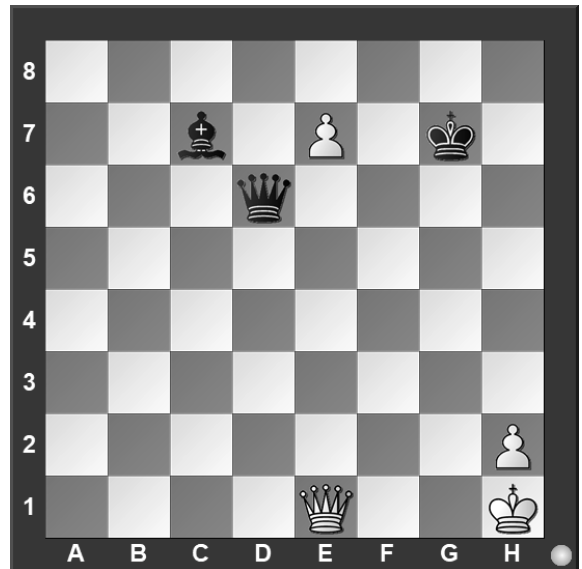
#9. White to move



What is White's best move?

- a) Qh4
- b) Qd4
- c) Qxc5
- d) Ng5

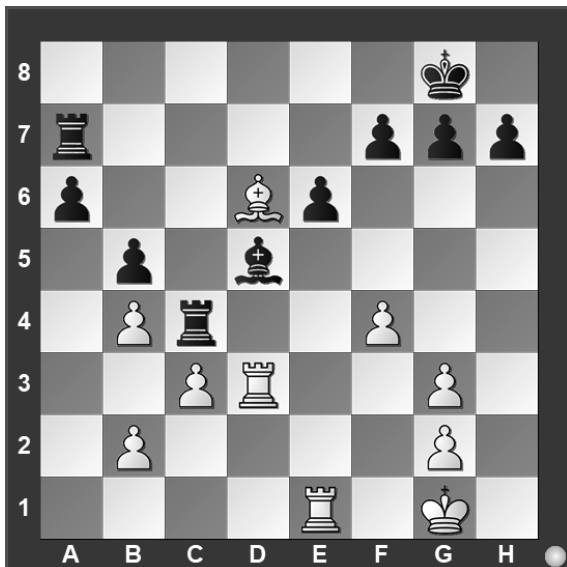
#10. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Knight
- d) Bishop

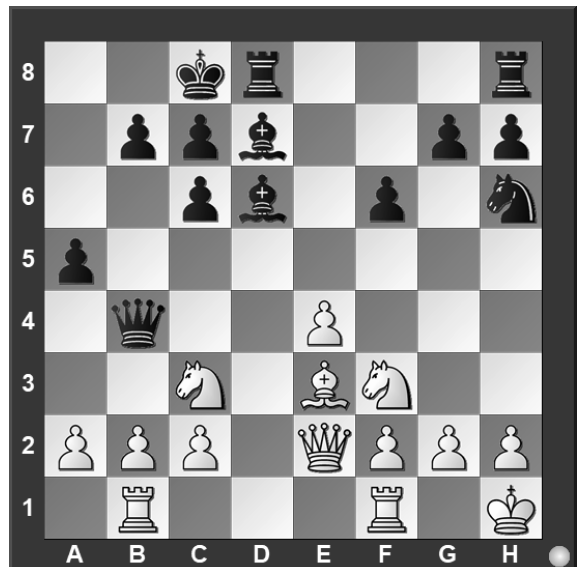
#11. White to move



What is White's best move?

- a) Rxd5
- b) b3
- c) Qc5
- d) Qf2

#12. White to move



What is White's best move?

- a) Qxh6
- b) a3
- c) e5
- d) Qd2

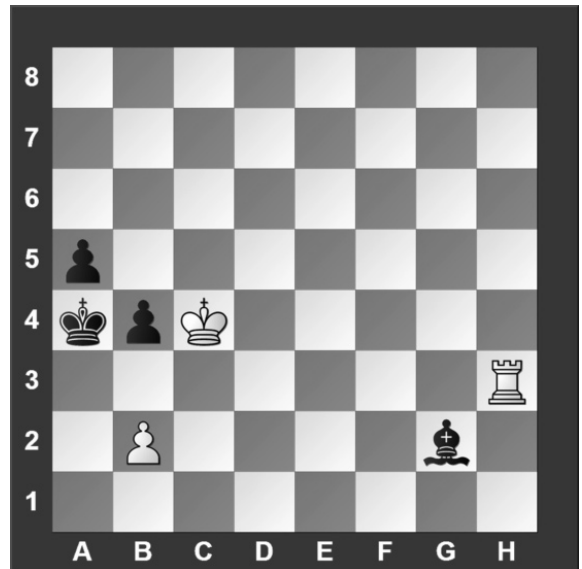
#13. White to move



If White can checkmate Black in one move, what is the checkmating move?

- a) ♖×g8
- b) ♖×g7
- c) ♖f8
- d) ♗×g7

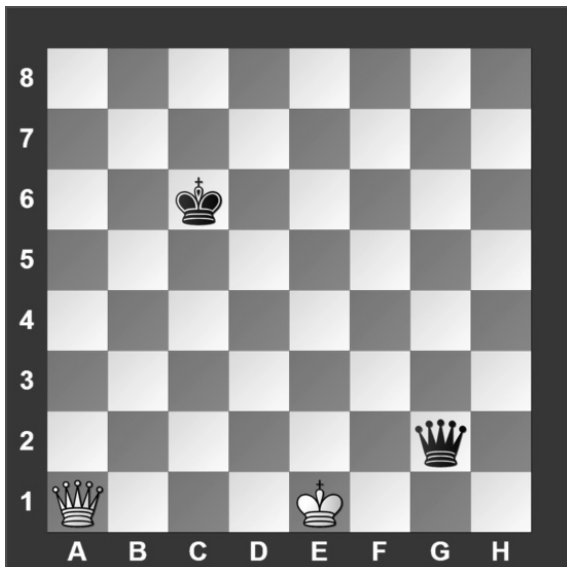
#14. White to move



What is White's best move?

- a) ♖a3
- b) ♖h1
- c) b3
- d) ♖c3

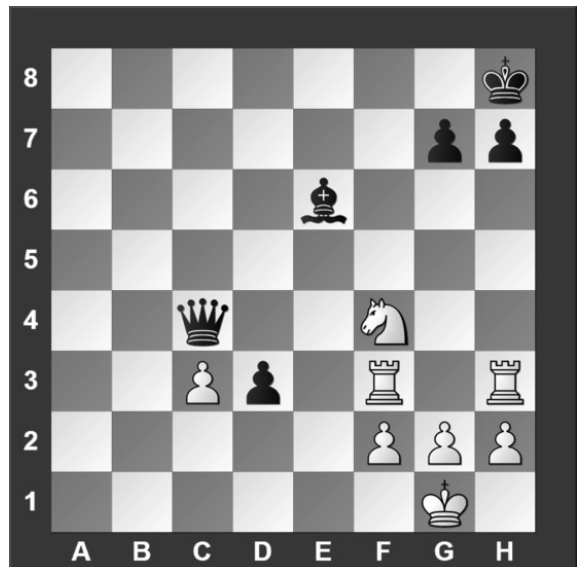
#15. White to move



What is White's best move?

- a) ♖f6
- b) ♖c3
- c) ♖c1
- d) ♖a8

#16. White to move



If White can checkmate Black in two moves, what is the *first* move?

- a) ♖×h7
- b) ♗g6
- c) ♗×e6
- d) ♖×d3



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Spring District — Grades 2 & 3**

ANSWER KEY

Test

- | | | | |
|----|---|-----|---|
| 1. | A | 9. | B |
| 2. | C | 10. | C |
| 3. | B | 11. | A |
| 4. | A | 12. | B |
| 5. | D | 13. | D |
| 6. | B | 14. | A |
| 7. | C | 15. | D |
| 8. | A | 16. | B |

Tiebreaker

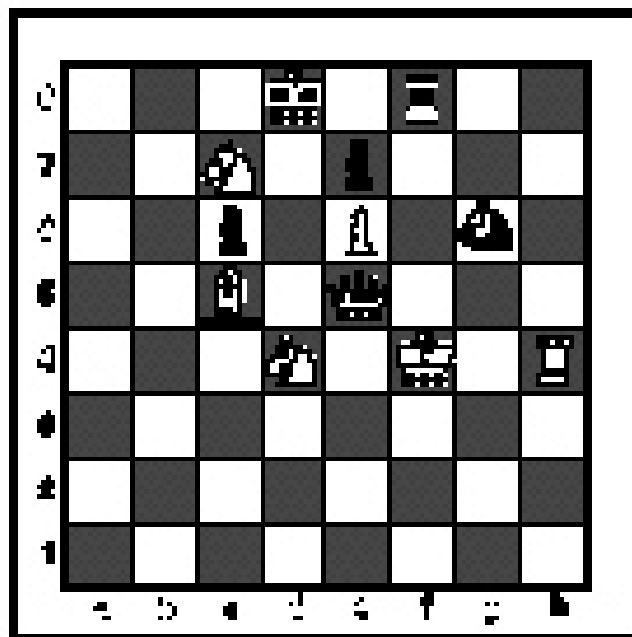
- | | | | |
|----|---|----|---|
| 1. | B | 5. | A |
| 2. | C | 6. | D |
| 3. | A | 7. | C |
| 4. | A | 8. | A |

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 4 & 5

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

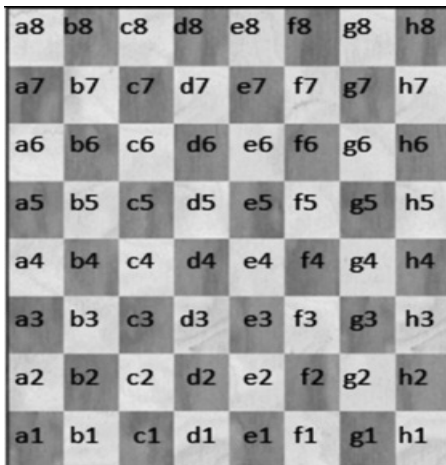
IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Invitational Test for grades four and five. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each correct answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

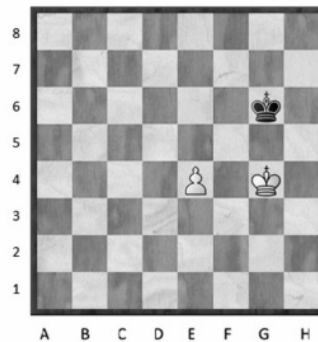
**a-h**

(We write the file it's on.)

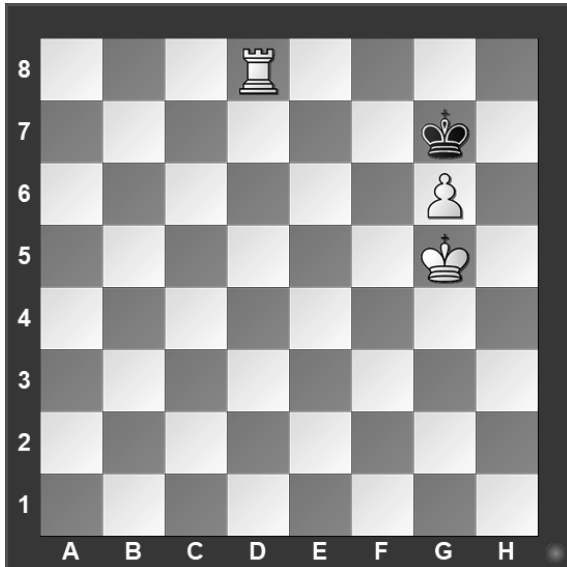
- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

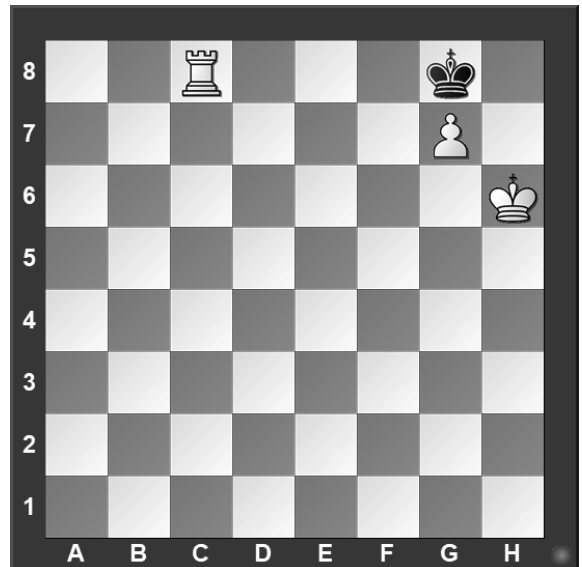
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

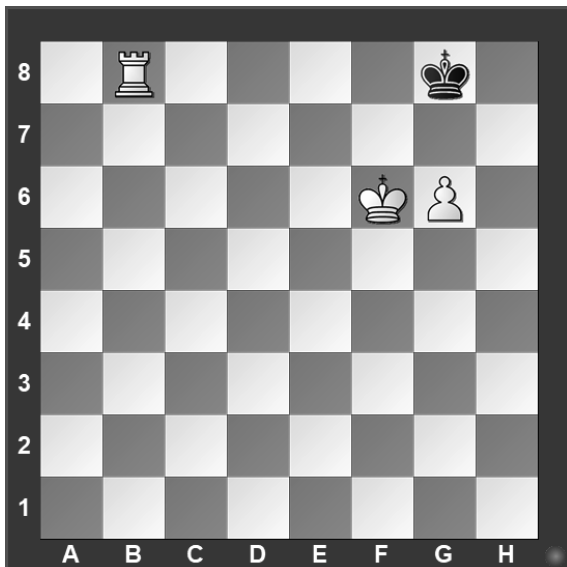
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

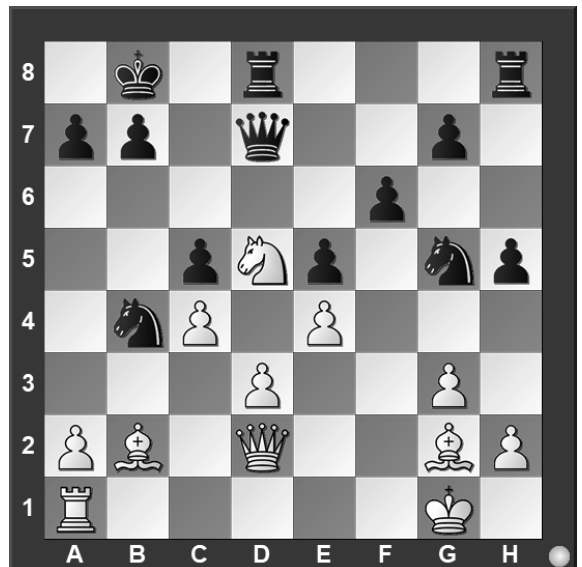
#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

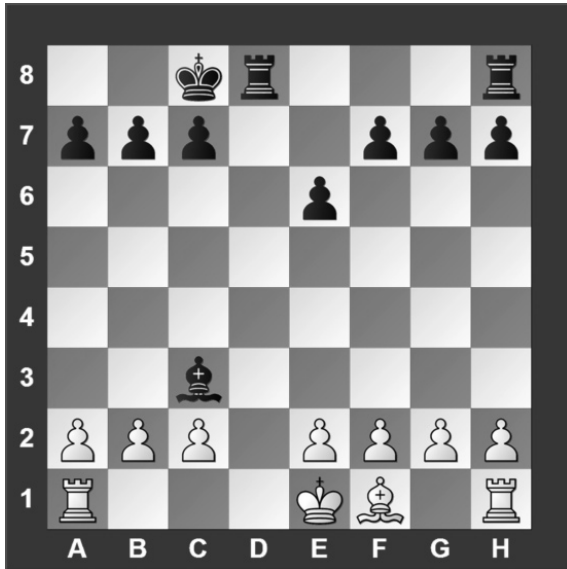
#4. White to move



Which side has material advantage?

- a) White.
- b) Black.
- c) It's even.
- d) It's not possible to tell.

#5. White to move



Which move below is possible for White?

- a) Short Castle .
- b) Long Castle.
- c) Capture the Bishop.
- d) Move the King

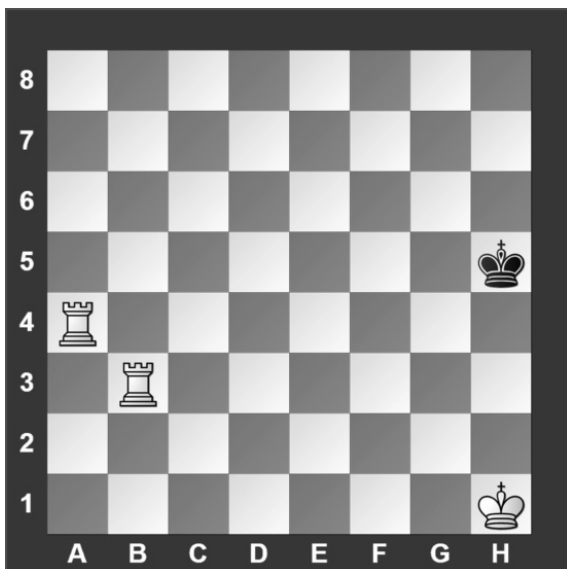
#6. White to move



Black just played e7 to e5. Which pawn can be captured?

- a) Black's e-pawn
- b) Black's f-pawn
- c) Black's g-pawn
- d) White can't capture a pawn.

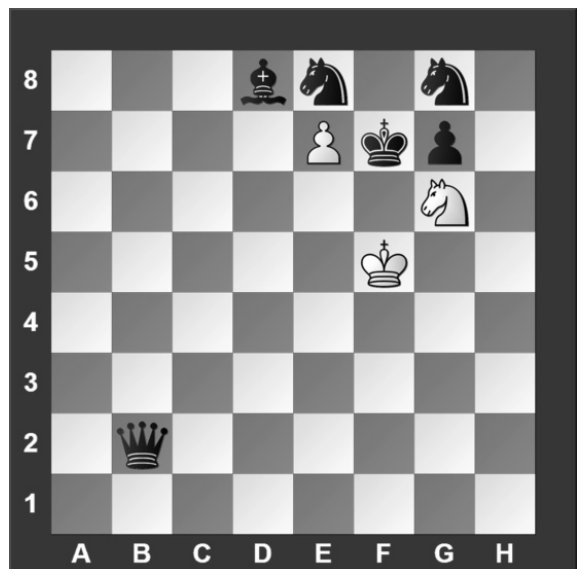
#7. White to move



How many moves does it take to check-mate Black?

- a) 1
- b) 2
- c) 3
- d) 4

#8. White to move



What piece should White promote to?

- a) Queen
- b) Knight
- c) Rook
- d) White can not promote

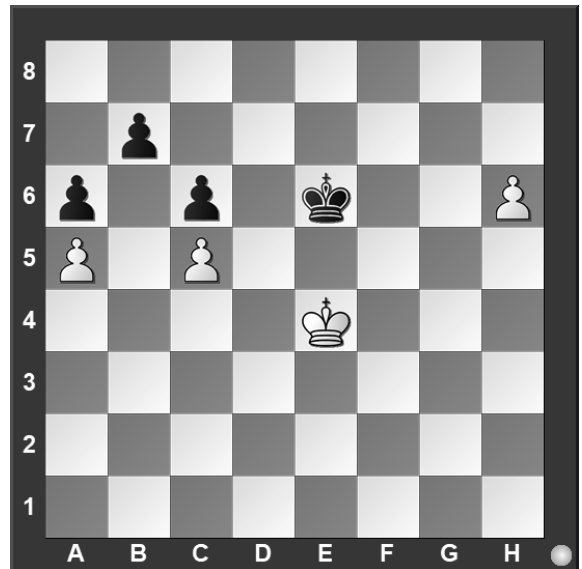
#9. White to move



What piece should White capture?

- a) Rook
- b) Bishop
- c) Knight
- d) pawn

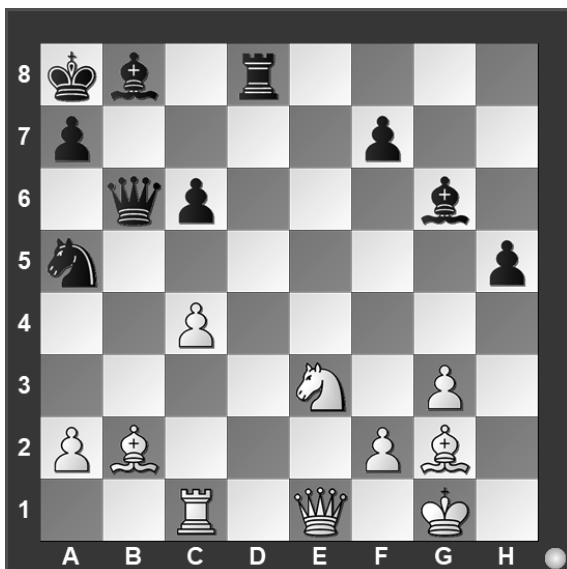
#10. White to move



With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

#11. White to move



What is White's best move?

- a) ♔×a5
- b) c5
- c) ♙c3
- d) ♙f6

#12. White to move



What is White's best move?

- a) ♘a5
- b) ♘e5
- c) c6
- d) ♙e4

#13. White to move



What is White's best move?

- a) ♖c7
- b) ♖b6
- c) ♖xc3
- d) ♖xe7

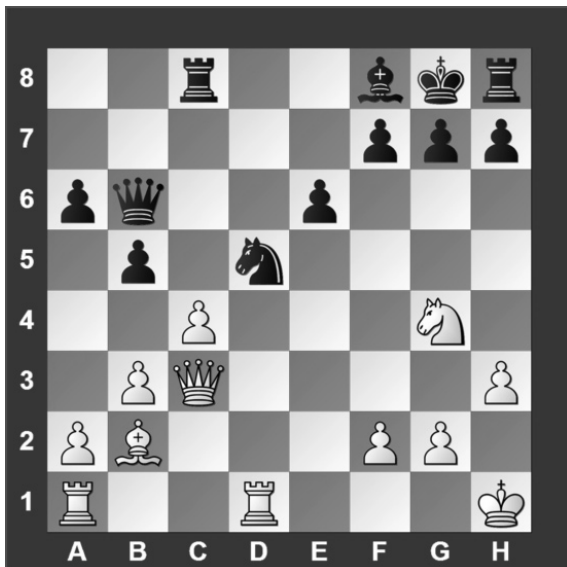
#14. White to move



If White can checkmate Black in two moves, what is the *first* move?

- a) ♖xf6
- b) ♖xc5
- c) ♖d6
- d) ♖g3

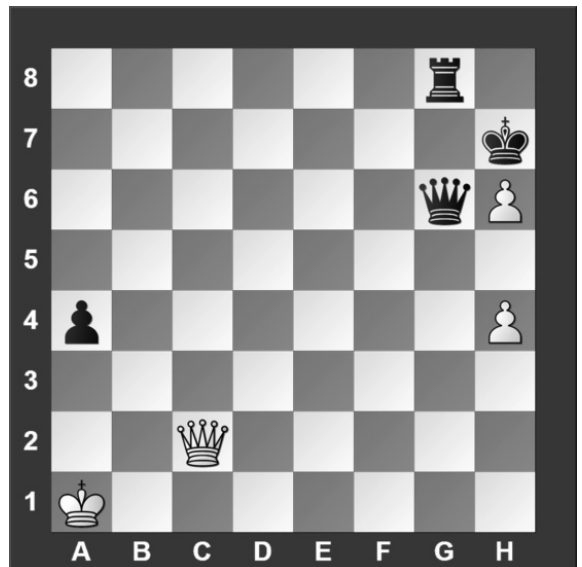
#15. White to move



What is White's best move?

- a) ♙xg7
- b) ♘h6
- c) cxd5
- d) ♖xd5

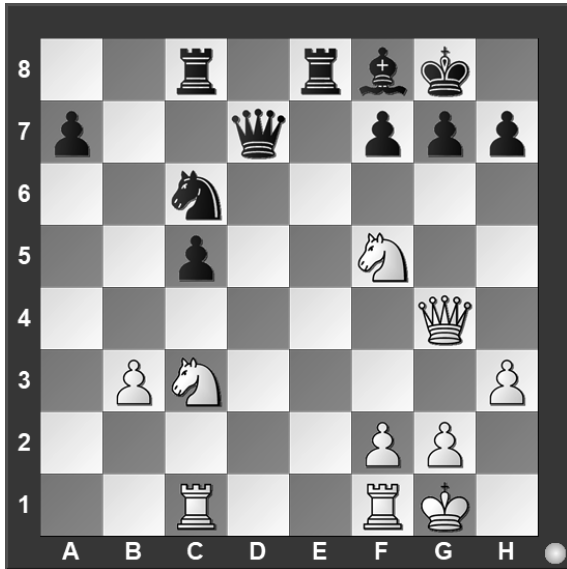
#16. White to move



What is White's best move?

- a) ♙xg6
- b) ♙c7
- c) ♙xa4
- d) h5

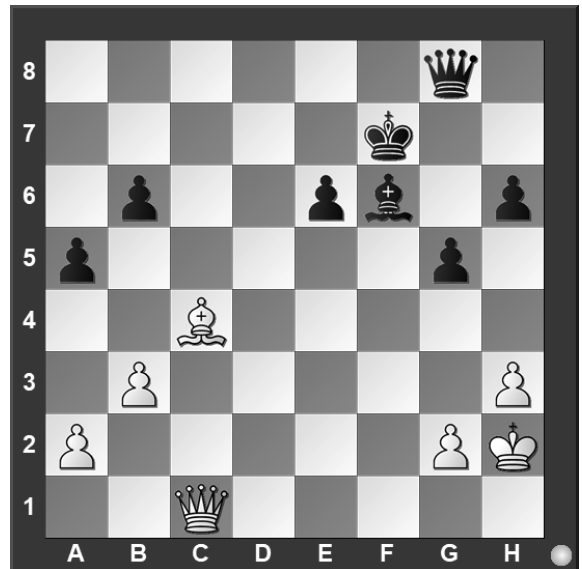
#17. White to move



What is White's best move?

- a) ♘e4
- b) ♖fd1
- c) ♘h6
- d) ♔xg7

#18. White to move



What is White's best move?

- a) ♔e3
- b) ♕xg6
- c) ♕d2
- d) ♕e1

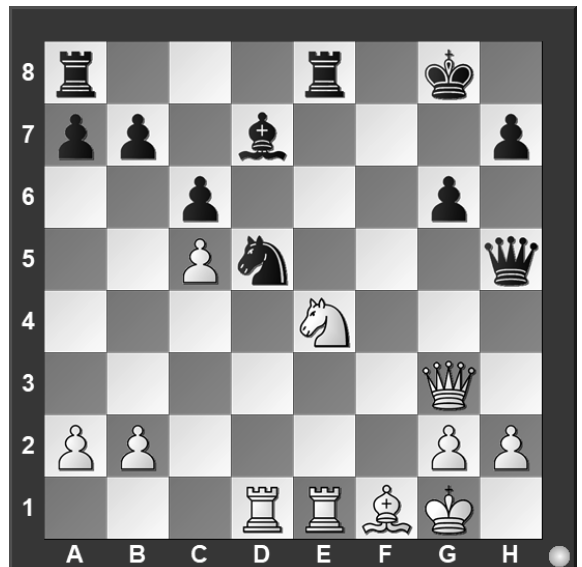
#19. White to move



What is White's best move?

- a) e6
- b) ♖g3
- c) ♘c5
- d) a5

#20. White to move



What is White's best move?

- a) ♘d6
- b) ♘f6
- c) ♖xh5
- d) ♕c4



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Spring District— Grades 4 & 5**

ANSWER KEY

Test

- | | |
|-------|-------|
| 1. B | 11. A |
| 2. C | 12. C |
| 3. A | 13. A |
| 4. B | 14. C |
| 5. C | 15. B |
| 6. A | 16. D |
| 7. B | 17. C |
| 8. B | 18. B |
| 9. B | 19. A |
| 10. A | 20. C |

Tiebreaker

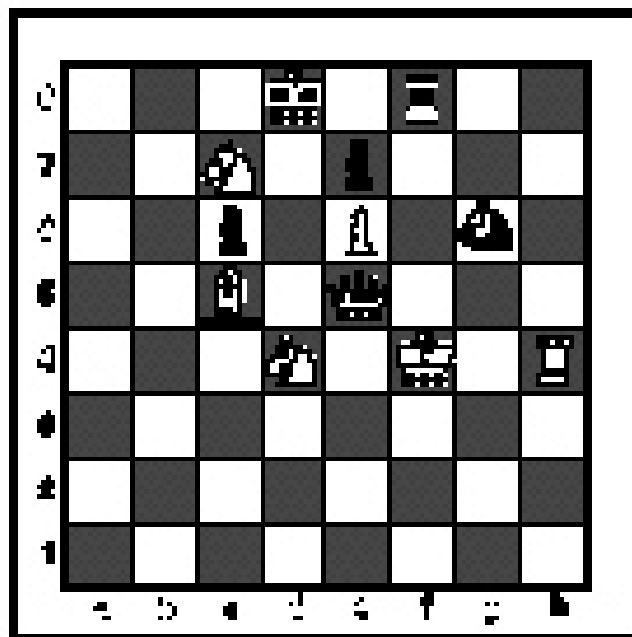
- | | |
|------|------|
| 1. B | 5. A |
| 2. C | 6. D |
| 3. A | 7. C |
| 4. A | 8. A |

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Chess Puzzle Solving

grades 6, 7, 8

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

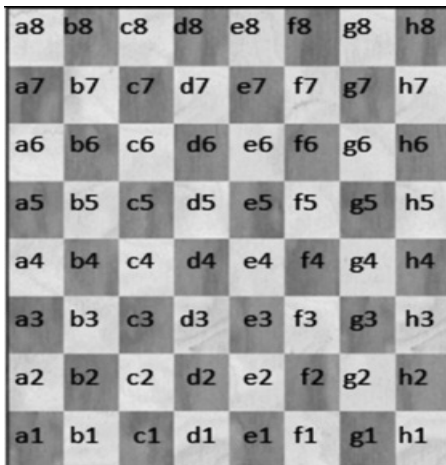
IMPORTANT INSTRUCTIONS:**[Test-administrators, please read text in this box aloud.]**

This is the UIL Chess Puzzle Solving Invitational Test for grades six through eight. There are 20 questions on this test. You have 30 minutes to complete it. All questions are multiple choice. Use the answer sheet to mark your answers. Multiple choice answers purposely do not indicate check, checkmate, or e.p. symbols. You will be awarded one point for each cor-rect answer. No deductions will be made for incorrect answers on this test. Finishing early is not rewarded, even to break ties. So use all of your time. Some of the questions may be hard, but all of the puzzles are interesting! Good luck and have fun!

If you don't already know chess notation, reading and referring to the section below on this page will help you.

How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

Each chessman can also be represented by a symbol, except for the pawn.
(Figurine Notation)

**a-h**

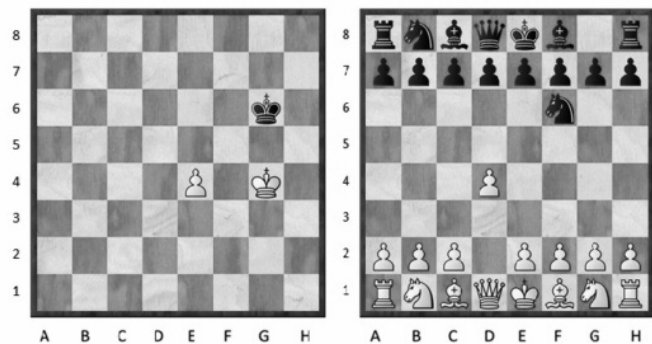
(We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.

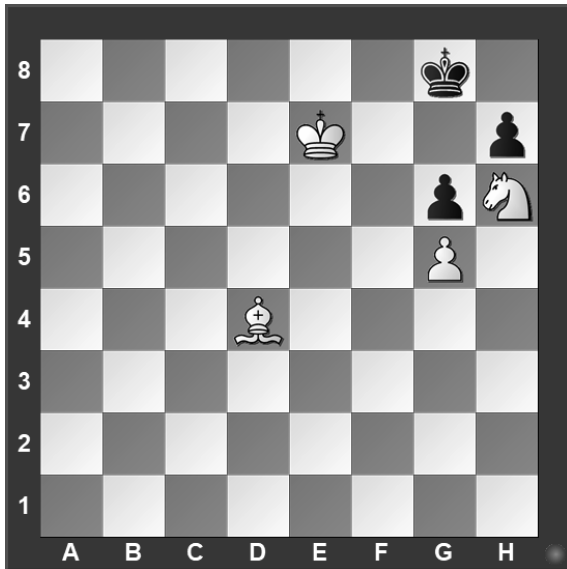
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

White has just played **e4**.Black has just played ... **Nf6**.

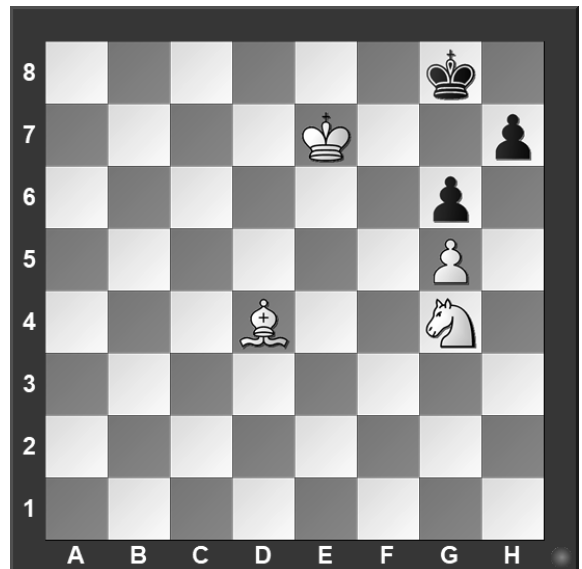
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

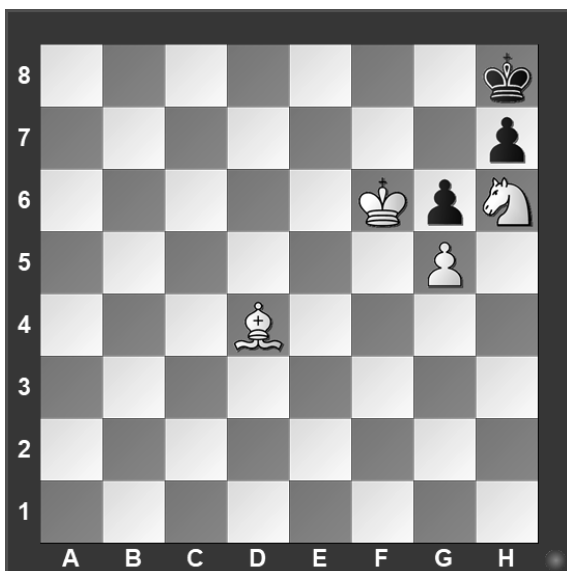
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

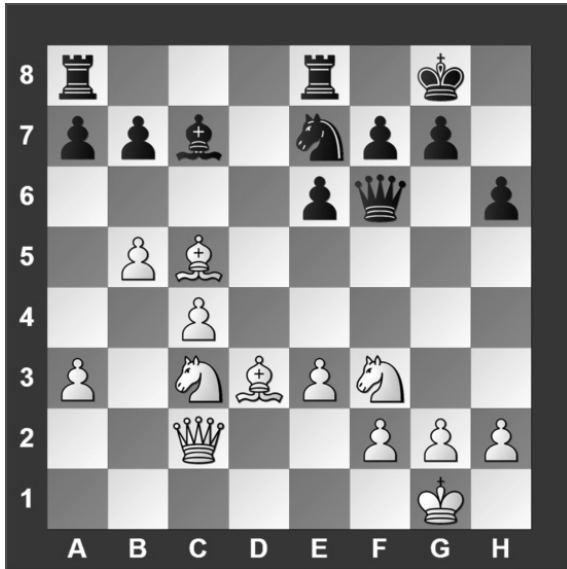
#4. White to move



Black just played e7 to e5. Which pawn can be captured?

- a) Black's f-pawn.
- b) Black's e-pawn.
- c) Black's c-pawn.
- d) White can't capture a pawn.

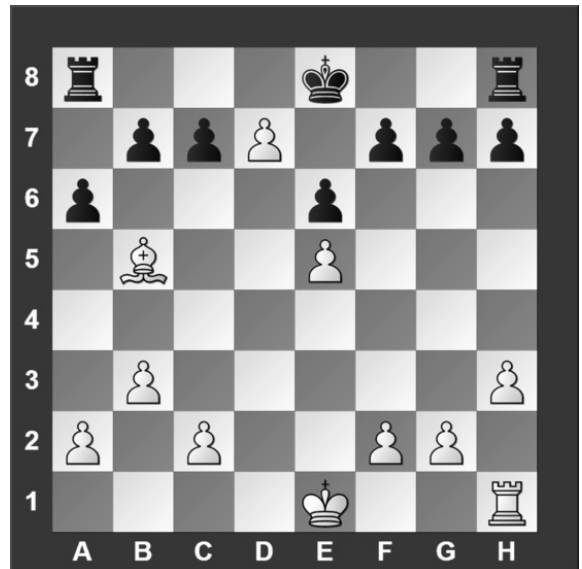
#5.



Which side has material advantage?

- a) White
- b) It is even.
- c) Black
- d) It is not possible to tell.

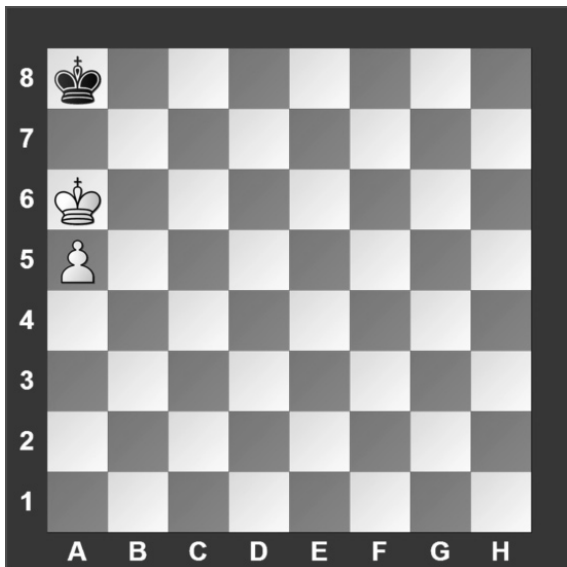
#6. White to move



Which move is possible for Black?

- a) Short Castle.
- b) Long Castle.
- c) Both A and B.
- d) Neither A or B.

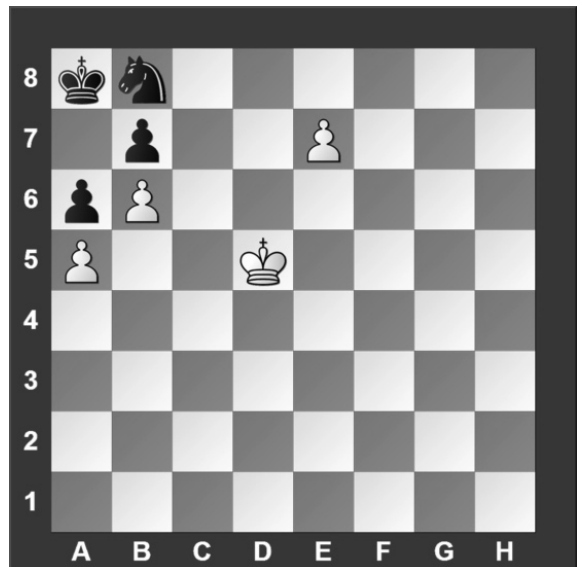
#7. White to move



What is the outcome of the game?

- a) White wins
- b) Black wins
- c) Draw
- d) Impossible to tell

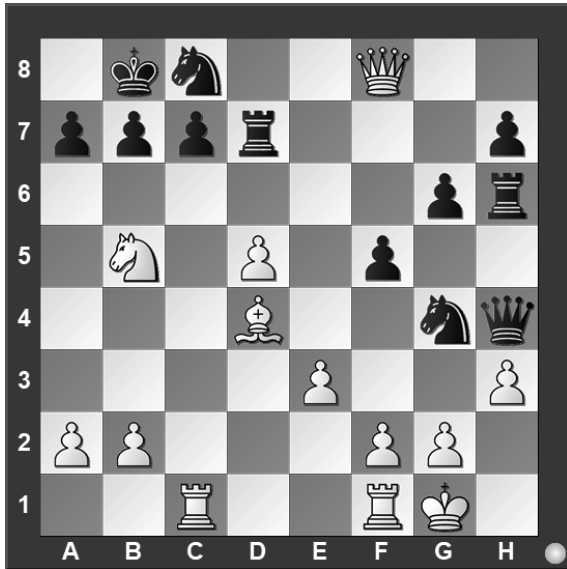
#8. White to move



What is the best move?

- a) Promote to a Queen
- b) Promote to a Rook
- c) Promote to a Knight
- d) Move the King to d6

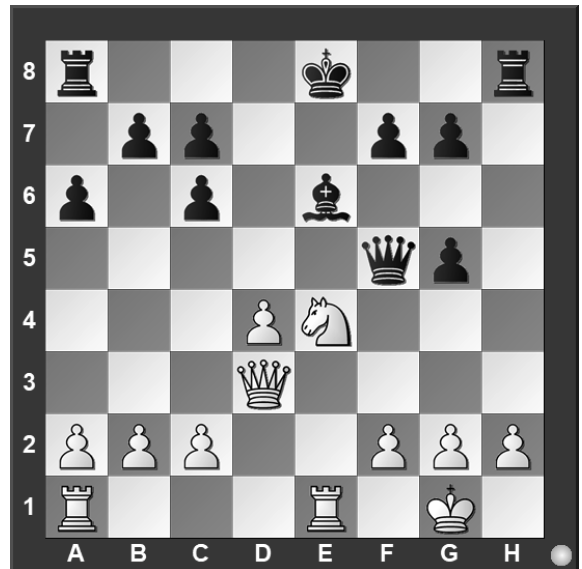
#9. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♖×a7
- b) ♕×a7
- c) ♖×c7
- d) ♖d6

#10. White to move



What is White's best move?

- a) ♖d6
- b) ♖f6
- c) ♕g3
- d) c4

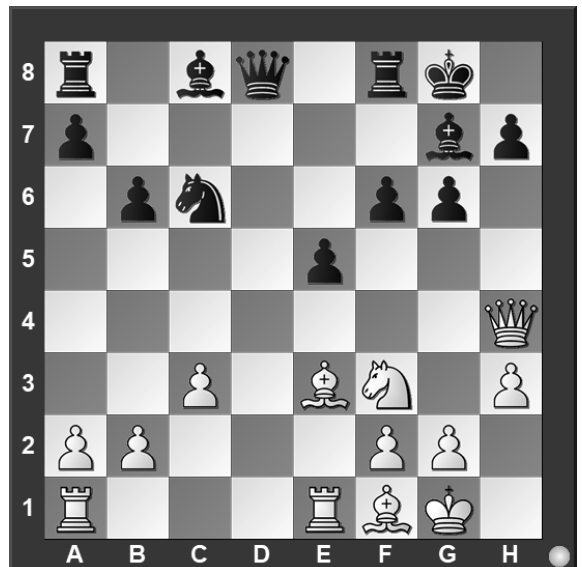
#11. White to move



What is White's best move?

- a) ♕e7
- b) ♕×f6
- c) ♖×g7
- d) ♖c8

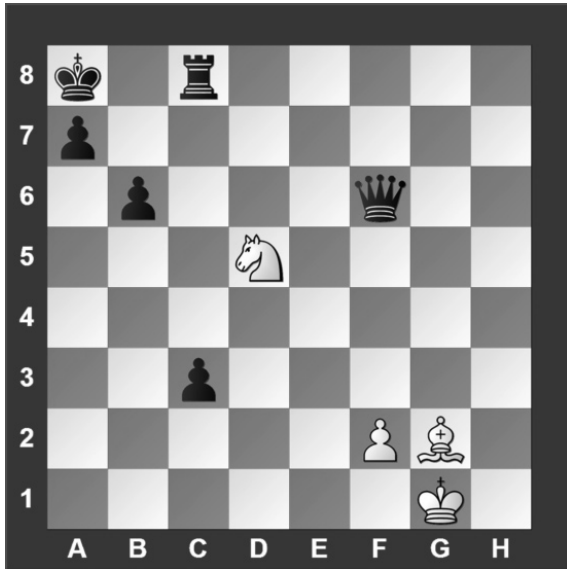
#12. White to move



What is White's best move?

- a) ♕c4
- b) ♕c4
- c) ♖ad1
- d) ♕b5

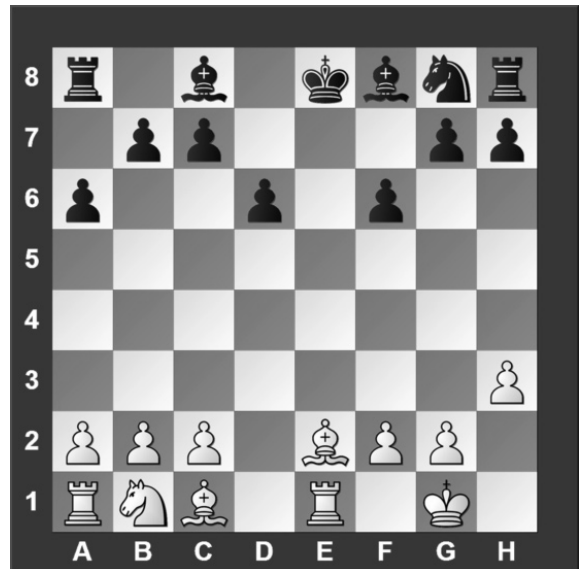
#13. White to move



White can checkmate Black in two moves, what is the *first* move?

- a) ♖×f6
- b) ♖×b6
- c) ♖c7
- d) ♖b4

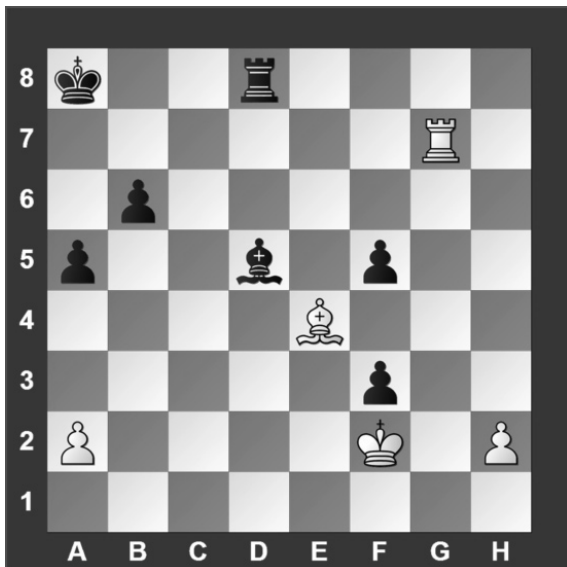
#14. White to move



What is White's best move?

- a) ♔h5
- b) ♔b5
- c) ♔c4
- d) ♔c3

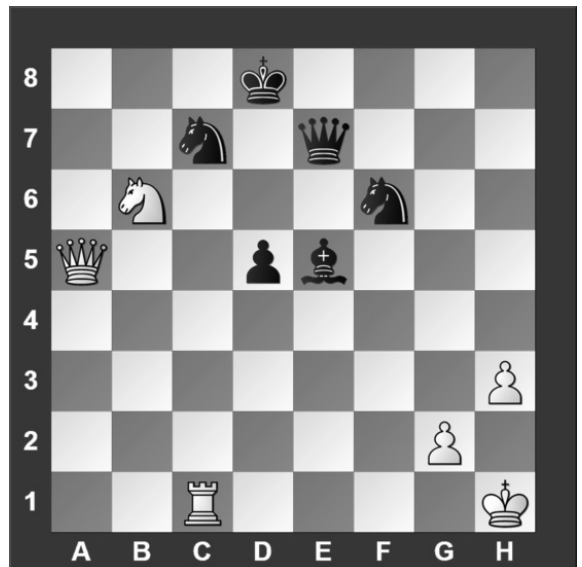
#15. White to move



What is White's best move?

- a) ♔×d5
- b) ♔×f5
- c) ♔g8
- d) ♔×f3

#16. White to move



White can checkmate Black in two moves, what is the *first* move?

- a) ♖×d5
- b) ♖a8
- c) ♖×c7
- d) ♖×d5

#17. White to move



What is White's best move?

- a) ♖e7
- b) ♖xc8
- c) ♗xf5
- d) a4

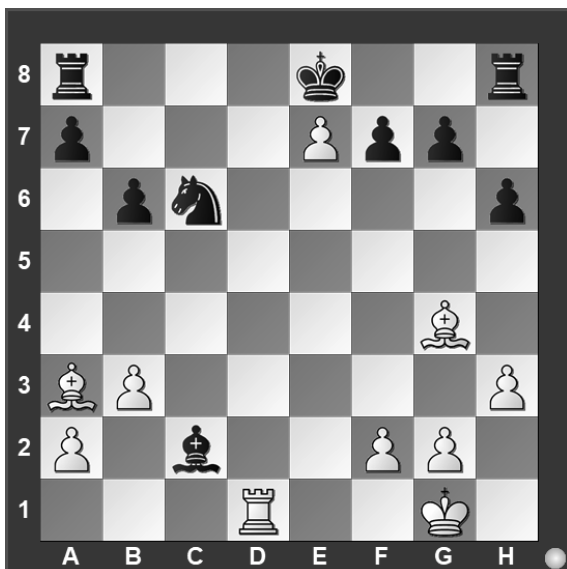
#18. White to move



What is White's best move?

- a) ♖f1
- b) ♗xh6
- c) ♗h2
- d) ♖bf1

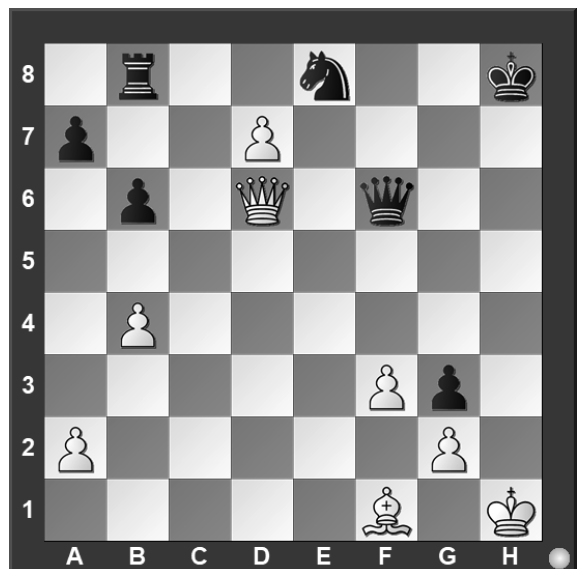
#19. White to move



How many moves does it take to checkmate Black?

- a) 1
- b) 2
- c) 3
- d) There is no checkmate

#20. White to move



What piece should White capture?

- a) Queen
- b) Rook
- c) Knight
- d) pawn



**University Interscholastic League
A+ Chess Puzzle Contest
2024-2025 Spring District — Grades 6, 7, and 8
ANSWER KEY**

Test

- | | |
|-------|-------|
| 1. A | 11. C |
| 2. D | 12. B |
| 3. B | 13. C |
| 4. B | 14. B |
| 5. C | 15. C |
| 6. D | 16. B |
| 7. C | 17. B |
| 8. D | 18. B |
| 9. B | 19. A |
| 10. A | 20. C |

Tiebreaker

- | | |
|------|------|
| 1. B | 5. A |
| 2. C | 6. D |
| 3. A | 7. C |
| 4. A | 8. A |

Contestant Number _____

Contestant Name _____
(to be filled in after judging)

UIL A+ Creative Writing Evaluation Sheet

Elementary

Evaluation criteria are listed in the order of importance. Circle score rating in each of the three major areas of *creativity & interest*, *organization*, and *correctness of style* and tally the points.

(60%) 1 2 3 4 5 6 7 8 9 10 11 12

CREATIVITY & INTEREST Interest depends primarily upon substance. It depends next upon clarity and upon including specific details and examples, which individualize the story as an outgrowth of the writer's character and experience.

(30%) 1 2 3 4 5 6

Organization A well-organized story will present ideas in a logical and coherent manner.

(10%) 1 2

Correctness of Style Grammatical correctness of style includes avoiding errors in sentence structure, punctuation, grammar, spelling and word usage.

TOTAL SCORE: _____/20

CONSTRUCTIVE COMMENTS FOR THE CONTESTANT

Please read "Instructions for the Judges" before evaluating second grade Creative Writing contestants' papers. Please make your comments using language understandable to the contestant and make all comments constructive and supportive. While judges are to consider all three elements in selecting the most effective compositions, they should weigh creativity and interest more than organization, and organization more than correctness of style.

Judge's signature _____



A+ Creative Writing Contest

INVITATIONAL

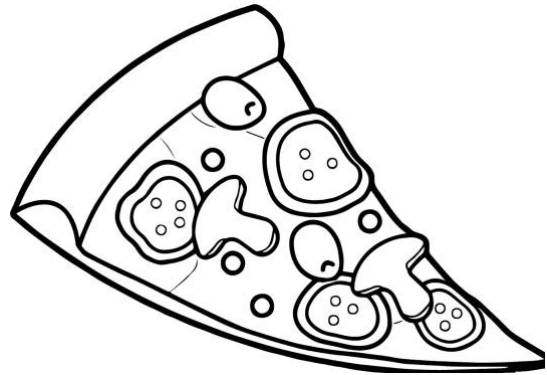
GRADE 2

2024-2025

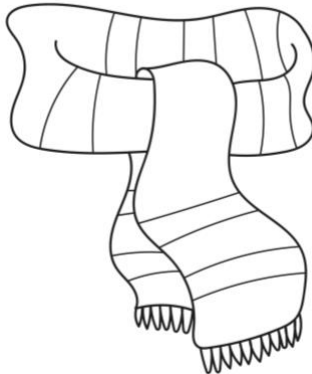
Write a story on your own paper. You must write about at least one of the things shown on this page. You may use as many of the pictures as you want.



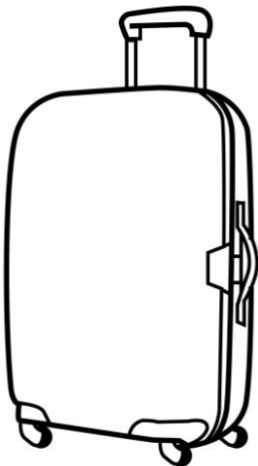
marbles



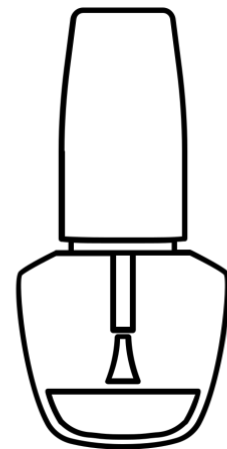
pizza



scarf



suitcase



nail polish



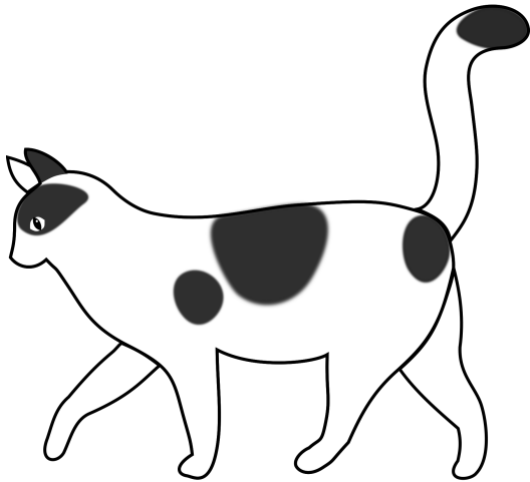
A+ Creative Writing Contest

FALL/WINTER DISTRICT

GRADE 2

2024-2025

Write a story on your own paper. You must write about at least one of the things shown on this page. You may use as many of the pictures as you want.



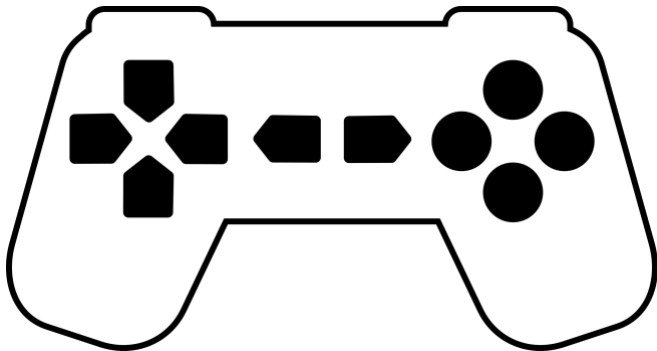
cat



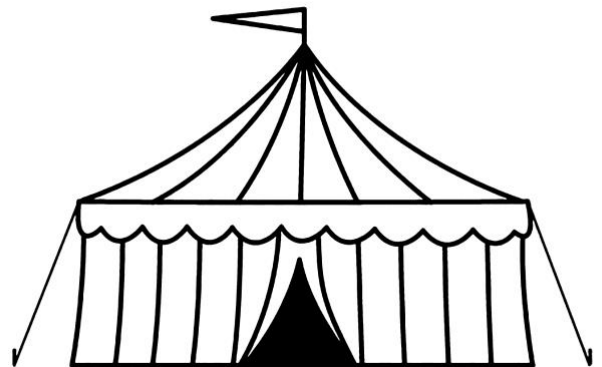
backpack



sandals



video game controller



circus



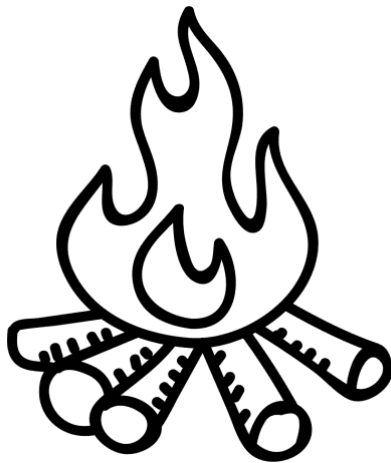
A+ Creative Writing Contest

SPRING DISTRICT

GRADE 2

2024-2025

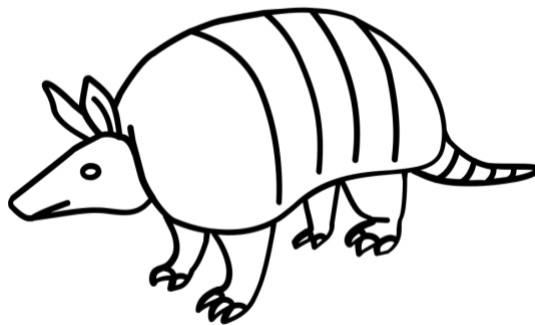
Write a story on your own paper. You must write about at least one of the things shown on this page. You may use as many of the pictures as you want.



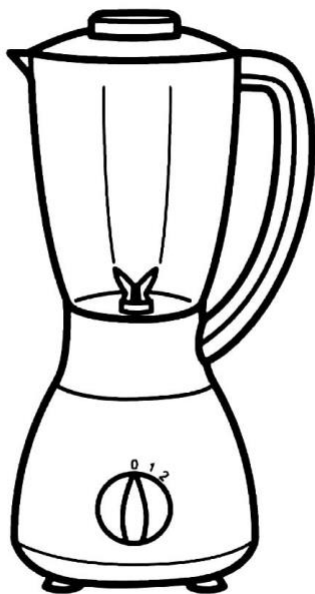
campfire



saxophone



armadillo



blender



ice cream truck

CONTESTANT NUMBER:**FOR GRADER USE ONLY**

Score Test Below:

_____out of 120. Initials_____

_____out of 120. Initials_____

Papers contending to place:

_____out of 120. Initials_____



University Interscholastic League
A+ Dictionary Skills Contest • Answer Sheet

Write your contestant number in the upper right corner, and circle your grade below.

Circle Grade Level: 5 6 7 8

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. A B C D

16. A B C D

17. A B C D

18. A B C D

19. A B C D

20. A B C D

21. A B C D

22. A B C D

23. A B C D

24. A B C D

25. A B C D

26. A B C D

27. A B C D

28. A B C D

29. A B C D

30. A B C D

31. A B C D

32. A B C D

33. A B C D E F G H

34. A B C D E F G H

35. A B C D E F G H

36. A B C D E F G H

37. A B C D E F G H

38. A B C D E F G H

39. A B C D E F G H

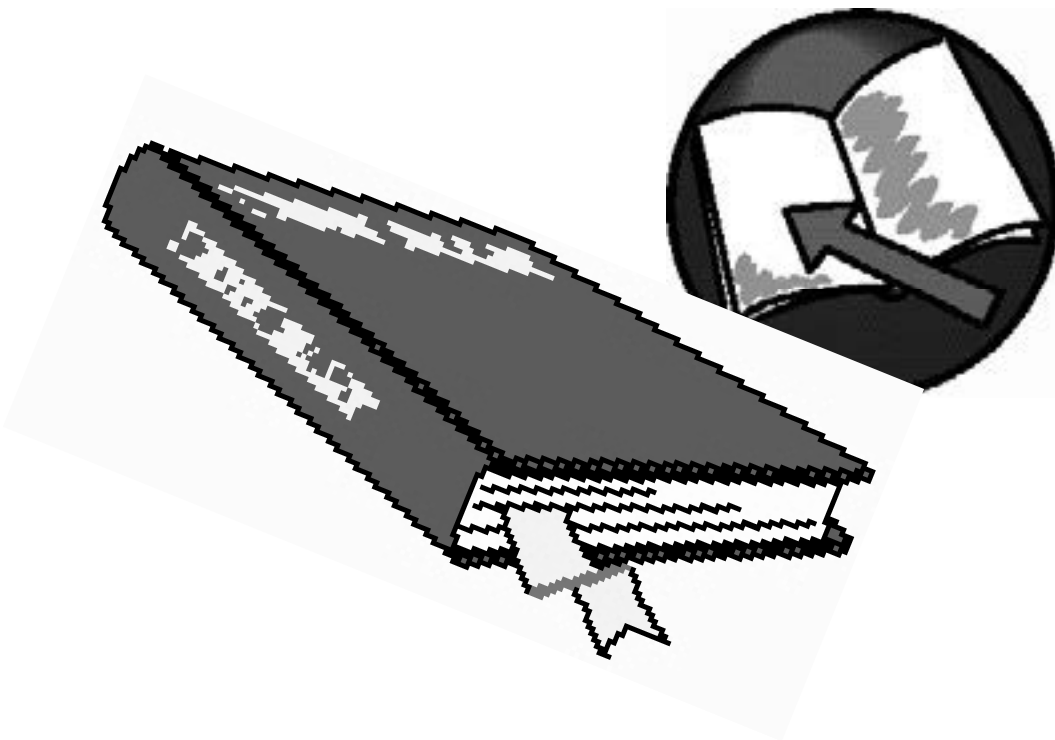
40. A B C D E F G H

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Dictionary Skills

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

**University Interscholastic League
2024-2025 Dictionary Skills Contest
Invitational District Test — Grades 5 & 6**

1. Emily was taken aback by what Jennifer said. What did Emily feel?
A. confused
B. surprised
C. angered
D. saddened
2. In Greek mythology, who were the parents of Antigone?
A. Zeus and Hera
B. Odysseus and Penelope
C. Oedipus and Jocasta
D. Apollo and Artemis
3. What kind of person is a rogue?
A. kind
B. intelligent
C. rude
D. wicked
4. Rachel was promoted at her job because of nepotism. Why did she get promoted?
A. She filled the position of someone who retired.
B. She is a relative of her boss.
C. She had the best interview of all the job candidates.
D. She has an advanced degree in her job field.
5. What does it mean when a reveille is played on a military base?
A. It is time to wake up and start the day.
B. It is time for a meal.
C. It is time to go to bed for the night.
D. It is a holiday.
6. A short story used to illustrate a moral or spiritual truth is called _____.
A. paradigm
B. parable
C. paragon
D. parabet
7. Which of these materials could be formed into an ingot?
A. cotton
B. wood
C. silver
D. glass
8. A wyandotte is a breed of what farm animal?
A. horse
B. pig
C. cow
D. chicken
9. In the ear, where is the pinna located?
A. in front of the eardrum
B. inside of the eustachian tube
C. next to the malleus
D. on the outside of the ear near the lobe

10. What colors are in tortoiseshell?
A. brown and yellow
B. green and blue
C. red and purple
D. gray and white
11. Methylene blue can be used to cure what kind of poisoning?
A. lead
B. mercury
C. cyanide
D. carbon monoxide
12. A bull snake feeds chiefly on what type of animal?
A. birds
B. rodents
C. insects
D. other snakes
13. The Chimborazo Mountain is _____ feet tall at its peak.
A. 5,280
B. 8,761
C. 11,674
D. 20,561
14. The Beaufort scale is used to measure the force of wind on a scale of _____?
A. 0 to 12
B. 1 to 10
C. 0 to 50
D. 1 to 15
15. What was the name of the person who ran the first marathon?
A. Aristotle
B. Pheidipides
C. Achilles
D. Odysseus
16. Where do the Frisian people live?
A. Norway
B. Sweden
C. The Netherlands
D. Finland
17. Linda is getting her AA degree in the spring. What degree is she receiving?
A. administrator in aircraft
B. assistant in authorship
C. associate in arts
D. attorney in area
18. Jenna is known to her friends as very munificent. What quality does she have?
A. She is generous.
B. She is prone to anger.
C. She is neat.
D. She is tall.
19. Mesopotamia was known as an agrarian society. What was their society's main activity?
A. hunting/gathering
B. farming
C. animal husbandry
D. feudalism
20. Where is the withers located on a horse?
A. on the forehead
B. on the back
C. on the stomach
D. on the snout

21. The pigment that makes human skin darker is known as _____.
A. meitnerium
B. mélange
C. melanin
D. melatonin
22. Paper mulberry trees are used to provide _____ when planted.
A. shade
B. fruit
C. animal habitats
D. soil stabilization
23. What ancient society's place for the dead was known as Elysium?
A. Egypt
B. Greece
C. Rome
D. Aztec
24. Another way to say pen name is _____?
A. nomogram
B. nominal
C. nom de plume
D. nonce
25. What two time zones split the state of South Dakota?
A. mountain and central
B. Pacific and mountain
C. central and eastern
D. Pacific and eastern
26. Cobalt chloride is _____ when dry and _____ when combined with water?
A. red; black
B. blue; deep pink
C. white; light blue
D. light green; dark green
27. The chemical element tantalum has an atomic number of _____.
A. 73
B. 95
C. 108
D. 40
28. Sego lilies are mainly found on which continent?
A. Australia
B. Europe
C. North America
D. Asia
29. What is jute used to make?
A. paintings and sketches
B. sacks and twine
C. roofs and doors
D. jewelry and crowns
30. What was the orchestra area of a theater used for in Ancient Greece?
A. musicians
B. seating
C. ticket sales
D. dancers
31. The orchestra conductor wants to tell her musicians to play slowly. What is the musical term she should use?
A. moderato
B. vivace
C. adagio
D. allegro

32. Jenna can't decide between wearing a blue or red dress to prom this year. She is _____ between her choices.

A. venerating

B. versifying

C. vacillating

D. vying

Match each of the following words to its correct meaning:

_____ 33. Oort cloud

A. courteous

_____ 34. macrame

B. the color of blood

_____ 35. oblique

C. a common mineral

_____ 36. sanguine

D. the art of tying knots into patterns

_____ 37. chivalrous

E. trembling sound

_____ 38. quaver

F. neither perpendicular nor parallel

_____ 39. geisha

G. small icy bodies that orbit the sun

_____ 40. quartz

H. Japanese entertainer

**University Interscholastic League
2024-25 Dictionary Skills Contest
Invitational Test — Grades 5 & 6**

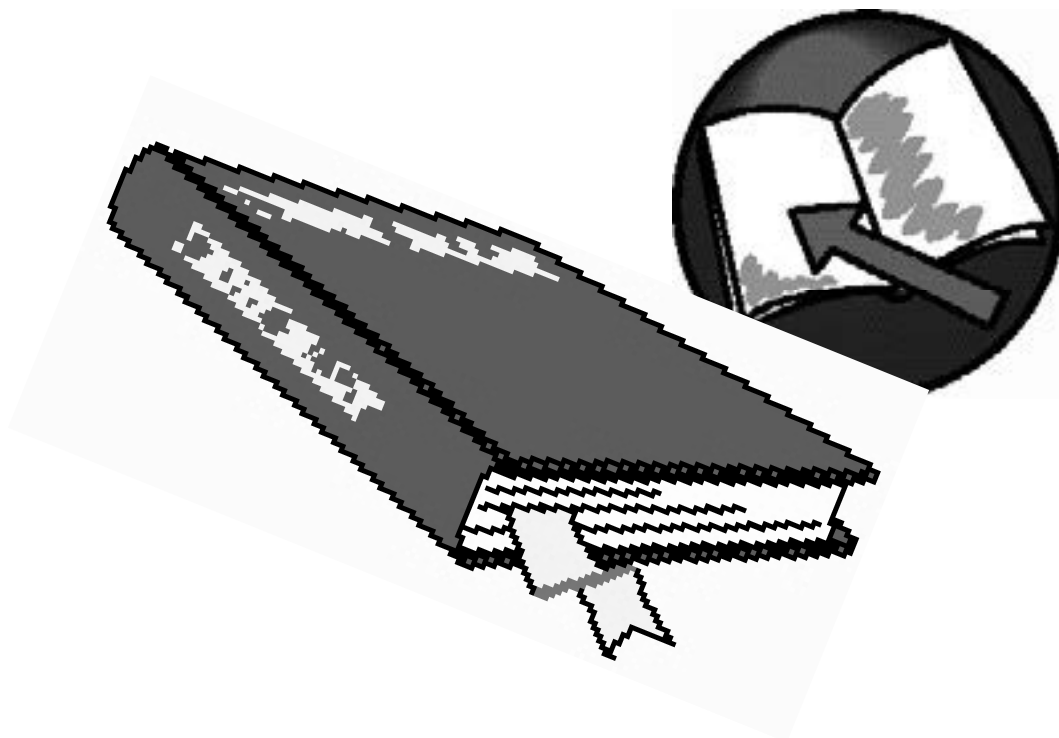
Answer Key

- | | |
|-------|-------|
| 1. B | 21. C |
| 2. C | 22. A |
| 3. D | 23. B |
| 4. B | 24. C |
| 5. A | 25. A |
| 6. B | 26. B |
| 7. C | 27. A |
| 8. D | 28. C |
| 9. D | 29. B |
| 10. A | 30. D |
| 11. C | 31. C |
| 12. B | 32. C |
| 13. D | 33. G |
| 14. A | 34. D |
| 15. B | 35. F |
| 16. C | 36. B |
| 17. C | 37. A |
| 18. A | 38. E |
| 19. B | 39. H |
| 20. B | 40. C |

FALL/WINTER DISTRICT 2024-2025
A+ ACADEMICS



University Interscholastic League



Dictionary Skills

grades 5 & 6

DO NOT OPEN TEST
UNTIL TOLD TO DO SO

**University Interscholastic League
2024-2025 Dictionary Skills Contest
Fall/Winter District Test — Grades 5 & 6**

1. When does the sun enter Taurus according to the zodiac?
A. March 21
B. April 20
C. May 21
D. June 22
2. In which of the following time periods would you have been most likely to find people using runes?
A. 2nd century
B. 19th century
C. 12th century
D. 21st century
3. Hiawatha was the chief of which Native American tribe?
A. Iroquois
B. Apache
C. Cherokee
D. Navajo
4. Mr. Jones is very penurious. What quality does he have?
A. generosity
B. affability
C. gregariousness
D. stinginess
5. Which of the following is closest to a firkin?
A. boat
B. barstool
C. barrel
D. broom
6. Three of the major temperature scales are Fahrenheit, Celsius, and _____.
A. Beaufort
B. Kelvin
C. Mohs
D. Richter
7. Which of the following is NOT a color that larkspur can be?
A. blue
B. yellow
C. white
D. pink
8. Treacle is the British word for _____.
A. caramel
B. nougat
C. toffee
D. molasses
9. What supernatural beings were commonly believed to gather on Walpurgis Night?
A. vampires
B. witches
C. werewolves
D. fairies

10. What is the metric equivalent of a pennyweight?
A. 0.373 kilograms
B. 1.555 grams
C. 0.907 metric tons
D. 35.239 liters
11. The indigenous people found mainly in Mississippi, Alabama, and Louisiana are known as the _____?
A. Chitin
B. Chinook
C. Chimera
D. Choctaw
12. Plants that are xeric do not require much of what element?
A. sunlight
B. carbon Dioxide
C. water
D. oxygen
13. How tall is Denali?
A. 29,032 feet
B. 20,320 feet
C. 19,341 feet
D. 14,692 feet
14. Which of the following is most closely related to the yucca plant?
A. agave
B. saguaro
C. aloe Vera
D. marigold
15. What language do we take admiral from?
A. Spanish
B. Japanese
C. Arabic
D. German
16. Annie owns a piebald cat. What color coat does her cat likely have?
A. orange
B. striped brown
C. black and white
D. gray
17. How is the number 1 indicated in Morse code?
A. - . . - .
B. - - - - -
C. - - . . .
D. . - - - -
18. What does the B stand for in FBI?
A. Bureau
B. Business
C. Brigade
D. Band
19. If you see an albatross in the wild, where will it likely be?
A. forests
B. mountain ranges
C. seas
D. deserts
20. Bethany is trying to engrave a stone she found. What is this engraving called?
A. insular
B. intaglio
C. intemperate
D. insulin

21. Elvis Presley famously wore blue suede shoes. What does suede feel like?
A. velvet
B. sandpaper
C. glass
D. rubber
22. What country uses ringgit as its currency?
A. Laos
B. Thailand
C. Malaysia
D. Cambodia
23. Which of the following is a protein produced during blood clot formation?
A. fibula
B. fibrinogen
C. fiasco
D. fickle
24. Which of the following is NOT a place where wisteria typically grows?
A. China
B. Japan
C. United States
D. Great Britain
25. In which geologic time period did we see the earliest birds?
A. Cretaceous
B. Triassic
C. Jurassic
D. Cambrian
26. What shape is found on top of an obelisk?
A. cube
B. pyramid
C. sphere
D. cone
27. Which of the following is a synonym of mummer?
A. actor
B. banker
C. chef
D. doctor
28. What is the symbol for the element palladium?
A. Pd
B. Pl
C. Pu
D. Pa
29. Katie is ensconced on the playground. What game is she most likely playing?
A. four square
B. hide-and-seek
C. hopscotch
D. tag
30. Historically, halibut was frequently eaten on what kind of days?
A. warm days
B. rainy days
C. holy days
D. birthdays
31. What Asian country is sometimes described as Nipponese?
A. Japan
B. South Korea
C. Vietnam
D. India

32. Poplars are a kind of tree most closely related to what other trees?
- A. oaks
 - B. maples
 - C. willows
 - D. pines

Match each of the following words to its correct meaning:

- | | |
|-------------------------|-----------------------------|
| _____ 33. immutable | A. prison |
| _____ 34. watercress | B. nagging |
| _____ 35. hoosegow | C. adjustable window blinds |
| _____ 36. passé | D. impossible to change |
| _____ 37. jalousie | E. system of laws |
| _____ 38. termagant | F. doorkeeper |
| _____ 39. porter | G. out-of-date |
| _____ 40. jurisprudence | H. plant used in salads |

**University Interscholastic League
2024-25 Dictionary Skills Contest
Fall/Winter Test — Grades 5 & 6**

Answer Key

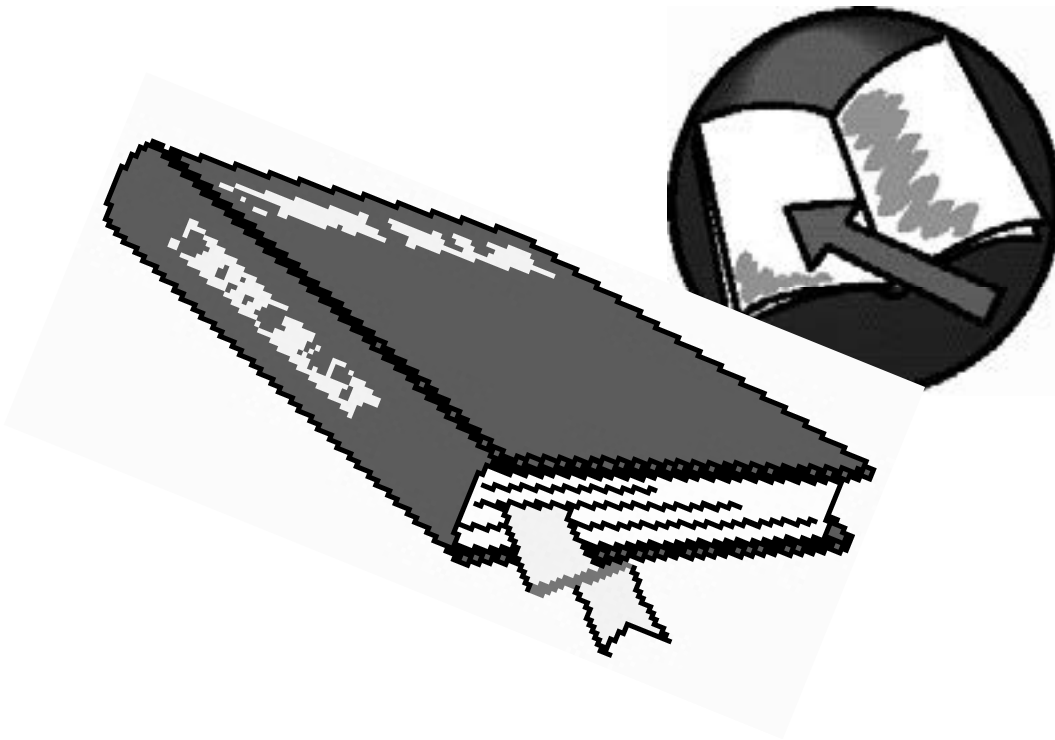
- | | |
|-------|-------|
| 1. B | 21. A |
| 2. C | 22. C |
| 3. A | 23. B |
| 4. D | 24. D |
| 5. C | 25. C |
| 6. B | 26. B |
| 7. B | 27. A |
| 8. D | 28. A |
| 9. B | 29. B |
| 10. B | 30. C |
| 11. D | 31. A |
| 12. C | 32. C |
| 13. B | 33. D |
| 14. A | 34. H |
| 15. C | 35. A |
| 16. C | 36. G |
| 17. D | 37. C |
| 18. A | 38. B |
| 19. C | 39. F |
| 20. B | 40. E |

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Dictionary Skills

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

**University Interscholastic League
2024-2025 Dictionary Skills Contest
Spring District Test — Grades 5 & 6**

1. A brigadier general is ranked just below what military position?
A. master sergeant
B. chief petty officer
C. major general
D. lieutenant colonel
2. There is inclement weather in Central Texas. What kind of weather is happening?
A. cloudy
B. windy
C. snowy
D. stormy
3. Where is the petiole located on a leaf?
A. at the tip of the leaf
B. at the bottom of the stem
C. in the center of the leaf
D. on the back of the leaf
4. What kind of geographical area is littoral?
A. a coast
B. a mountain
C. a plateau
D. a basin
5. In Greek mythology, Demeter is the goddess of _____.
A. wisdom
B. agriculture
C. the moon
D. marriage
6. Where was the Julian Calendar invented?
A. Athens
B. Cairo
C. Constantinople
D. Rome
7. What is another name for Memorial Day?
A. Decoration Day
B. Dedication Day
C. Decorum Day
D. Decree Day
8. Weevils are typically identified by their distinct _____.
A. snouts
B. legs
C. markings
D. antennae
9. What is the Arabic number for the Roman numeral M?
A. 10
B. 100
C. 1,000
D. 10,000
10. What does the Hindi name for khaki translate to?
A. strong fabric
B. military clothing
C. short pants
D. dust-colored

11. Ska music has its origin in what country?
A. Cuba
B. Jamaica
C. Haiti
D. Barbados
12. Ryan has a charley horse strain. Which of his body parts is **most likely** affected?
A. arm
B. neck
C. leg
D. back
13. A club sandwich is differentiated from other sandwiches by its _____.
A. third slice of bread
B. special sauce
C. melted cheese
D. fruit filling
14. Which of the following is the capital of Ghana?
A. Nairobi
B. Dakar
C. Accra
D. Pretoria
15. The hippopotamus was the animal most likely identified in the Bible by what name?
A. beguile
B. behemoth
C. bedizen
D. bedight
16. How long can Komodo dragons typically grow to be?
A. 6 inches
B. 8 yards
C. 10 feet
D. 12 meters
17. The Santa Gertrudis is tolerant to what kind of climate?
A. humid
B. polar
C. rainy
D. hot
18. Which of the following is a book in the Roman Catholic canon of the Old Testament?
A. Song of Songs
B. Susanna
C. Philemon
D. Haggai
19. What kind of medicine does a DVM practice?
A. dental
B. virology
C. veterinary
D. dermatology
20. In what U.S. state can you find the Hopi people?
A. Oklahoma
B. Massachusetts
C. Wisconsin
D. Arizona
21. The sugar found in fruit juices and honey is known as _____.
A. fructose
B. frond
C. fucus
D. fugue

22. In what months can Yom Kippur typically be observed?
- A. January and February
 - B. June and July
 - C. April and May
 - D. September and October
23. What is a wine flavored with herbs called?
- A. vermillion
 - B. vermouth
 - C. vertex
 - D. vestibule
24. From what country do we derive the practice of acupuncture?
- A. Japan
 - B. South Korea
 - C. China
 - D. Thailand
25. How many million miles is the Earth located from the Sun?
- A. 92.98
 - B. 141.67
 - C. 483.78
 - D. 886.72
26. Emily has been grinding her teeth recently. What is she doing?
- A. glowering
 - B. glutting
 - C. goggling
 - D. gnashing
27. What is another name for the woodchuck?
- A. beaver
 - B. groundhog
 - C. porcupine
 - D. guinea pig
28. What is the atomic number of copper?
- A. 29
 - B. 72
 - C. 14
 - D. 40
29. Himalayan cats usually have what color eyes?
- A. hazel
 - B. blue
 - C. brown
 - D. gray
30. The punctuation mark / is called by all of the following names EXCEPT?
- A. solidus
 - B. hyphen
 - C. slash
 - D. virgule
31. Which of the following flowers is most related to clematis?
- A. rose
 - B. lily
 - C. orchid
 - D. buttercup
32. What is the pest that can transmit Lyme disease called?
- A. deer fly
 - B. deer mouse
 - C. deer wasp
 - D. deer tick

Match each of the following words to its correct meaning:

- | | |
|--------------------------|------------------------------------|
| _____ 33. rink | A. dense object in space |
| _____ 34. Hubbard squash | B. master of ceremonies |
| _____ 35. neutron star | C. a feudal lord |
| _____ 36. elope | D. not pleasing or presentable |
| _____ 37. emcee | E. sheet of ice |
| _____ 38. ovenbird | F. to get married in secret |
| _____ 39. seamy | G. warbler with a dome-shaped nest |
| _____ 40. liege | H. oval-shaped vegetable |

**University Interscholastic League
2024-25 Dictionary Skills Contest
Spring Test — Grades 5 & 6**

Answer Key

- | | |
|-------|-------|
| 1. C | 21. A |
| 2. D | 22. D |
| 3. B | 23. B |
| 4. A | 24. C |
| 5. B | 25. A |
| 6. D | 26. D |
| 7. A | 27. B |
| 8. A | 28. A |
| 9. C | 29. B |
| 10. D | 30. B |
| 11. B | 31. D |
| 12. C | 32. D |
| 13. A | 33. E |
| 14. C | 34. H |
| 15. B | 35. A |
| 16. C | 36. F |
| 17. D | 37. B |
| 18. A | 38. G |
| 19. C | 39. D |
| 20. D | 40. C |

CONTESTANT NUMBER:

FOR GRADER USE ONLY

Score Test Below:

_____out of 75. Initials_____

_____out of 75. Initials_____

Papers contending to place:

_____out of 75. Initials_____



**University Interscholastic League
A+ Listening Contest • Answer Sheet**

Write your contestant number in the upper right corner, and circle your grade below.

Circle Grade Level : **5 6 7 8**

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. A B C D

16. A B C D

17. A B C D

18. A B C D

19. T F

20. T F

21. T F

22. T F

23. T F

24. T F

25. T F

UIL LISTENING CONTEST - GRADES 5/6
INVITATIONAL MEET 2024-2025

"White-Tailed Deer"

While driving down country roads in Texas, it's not unusual to see white-tailed deer in the distance grazing in fields of green grass and flowers. White-tailed deer (*Odocoileus virginianus*) are among the most iconic and widely distributed large mammals in Texas and North America. While virtually everyone in the central and eastern United States has seen a white-tailed deer, most people know very little about them. There are a number of interesting tidbits about whitetail deer.

White-tailed deer belong to the family Cervidae, which originated in the Miocene epoch around 20 million years ago. The genus *Odocoileus* emerged in the Pliocene epoch, with white-tailed deer being one of the most widespread and successful members of this genus. The Pliocene epoch extended from 5.333 million to 2.58 million years ago. It is the second and most recent epoch of the Neogene Period in the Cenozoic Era. The Pliocene follows the Miocene Epoch and is followed by the Pleistocene Epoch.

One reason white-tailed deer were able to survive through the ages is their ability to adapt to their surroundings. One of the most unique ways they adapt is their diverse diet. They are primarily browsers. A browser is a type of herbivorous animal that specializes in eating leaves, fruits of high-growing woody plants, soft shoots and shrubs. A browser generally does not feed on grass or other low growing vegetation. They can also be defined as animals that mainly eat non-grasses.

1:00

Whitetail deer can feed on twigs, bark, leaves, shrubs, the nuts and fruits of most vegetation, lichens, and other fungi. Plants such as yucca, huajillo brush, prickly pear cactus, ratama, comal, and a range of tough shrubs can be eaten if they live in a desert area. This is due to the fact that their digestive system is highly efficient in extracting nutrients from fibrous plant material. They are even able to switch to grazing depending on food availability. This enables them to thrive in different habitats from forests to

deserts to grasslands. Perfect for life in Texas. Though almost white-tails are entirely herbivorous, they have even been known to feed on nesting songbirds, field mice, and birds trapped in mist nets due to lack of other food.

Another adaptation is their coat. The coat of the white-tailed deer has coloration that serves as camouflage as well as protection from heat and cold. In summer, their reddish-brown coat blends with the forest floor, while in winter, it turns grayish brown to match snow-covered landscapes. This seasonal color change, known as molting, helps them evade predators and regulate body temperature. An indication of a deer's age is the length of the snout and the color of the coat, with older deer tending to have longer snouts and grayer coats.

2:00

Two more remarkable adaptations are their keen sense of smell and hearing. These senses are essential for detecting predators and communicating with other deer through vocalizations and scent marking. The most well-known scent gland in deer is the tarsal gland, located on the inside of their hind legs. When a deer rubs the gland against trees or other objects, it leaves behind a scent mark. This scent is used to warn other deer of their presence as well as to attract mates during the breeding season.

During the breeding season, or rut, male deer, known as bucks, compete for access to females, or does, through vocalizations, displays, and sometimes physical combat. This period is characterized by increased activity and aggression among males as they seek to establish dominance and mate with receptive females. Females, on the other hand, exhibit more subtle behaviors during the rut, including mate selection and avoidance of aggressive males. Once mated, females experience a gestation period of around 200 days, after which they give birth to one to three fawns in the spring or early summer.

3:00

Unlike humans, fawns are born precocial. This means that they are born in an advanced state and can feed themselves and move independently almost immediately. Their newborn coats are spotted which provides camouflage against predators. As mammals they do rely on their mother's milk for nourishment during the first few months, but

they soon transition to a diet of vegetation as they move toward adulthood. When seeking food, mothers leave their offspring hidden in forest vegetation. A fawn starts to follow its mother as she goes off to forage when it is about 4 weeks old. At 8 - 10 months old, they are weaned.

At one-year-old, young males leave their mothers but young females will often stay with them for two years. Males regrow their antlers every year. Males without branching antlers are often termed "spikehorn", "spiked bucks", or simply "spikers". The spikes can be quite long or very short. The length and branching of antlers are determined by nutrition, age, and genetics. Spiked bucks are different from "button bucks" or "nubbin' bucks", which are male fawns and are generally about 6 to 9 months of age during their first winter. They have skin-covered nobs on their heads. Males shed their antlers when all females have been bred, from late December to February.

4:00

White-tailed deer are crepuscular, which means that they are most active during dawn and dusk hours of the day. By being active during the hours of limited light, they are able to avoid predators more easily while still having sufficient light to see to forage for food. During the day, deer often rest in secluded areas, such as thickets or dense vegetation, to conserve energy and avoid detection.

White-tailed deer are usually considered solitary, particularly in summer. Their basic social unit is mother and fawns, although sometimes they do graze together in herds that can number hundreds of individuals. Bucks and does remain separate from each other except during the mating season. Bucks usually live alone or within small groups alongside other bucks. They use a number of forms of communication, such as sound, odor, body language, and marking with scratches. One trait of white-tails that sets them apart from other deer is the characteristic white underside to its tail. When alarmed, a white-tailed deer will raise its tail to warn other deer.

A very interesting fact about white-tailed deer is that they have dichromatic vision. This means that they see colors in the spectrum of two of the primary colors - in this case

blue and yellow. They cannot easily differentiate different shades of colors like red or orange. This is why hunters often wear bright orange. It is easily spotted by people (who have trichromatic vision and can see all three primary colors easily) but not by deer.

5:00 Because white-tailed deer live in many of the same areas as humans, it is important to note the interactions and effects that both species have on each other. Historically, Native American tribes considered deer to be symbols of strength, agility and abundance. They were major elements in their mythology, art, and ceremonies. European settlers relied on deer as a source of food, clothing, and tools. Today, white-tailed deer are also considered beautiful and are often hunted for food.

However, there are problems. One significant problem that poses risks to both human safety and deer populations is the continuing issue with deer-vehicle collisions. As humans continue to clear forests to build roads, deer habitats have shrunk. As a result, the frequency of auto/deer accidents has risen significantly. One way that engineers have tried to reduce accidents is by installing roadside fencing and wildlife crossings. Another problem with the close interaction of humans and deer is that deer tend to damage crops. Farmers and gardeners often have to build fences, use deer repellents, and frighten the deer to protect their crops.

6:00 Environmental scientists and game management specialists work to manage deer populations at levels that are sustainable and healthy for the ecosystem. Many years ago, over-hunting decreased the white tail deer population so much that they became scarce. Hunting regulations allowed the deer to repopulate. But even repopulation must be managed carefully. Too many deer can have a negative impact on vegetation, biodiversity, and the ecosystem as a whole.

Another concern is the spread of diseases among deer populations, including chronic wasting disease (CWD), which poses risks to both deer and other wildlife species. Chronic wasting disease is a fatal, neurological illness occurring in North American

members of the deer family including white-tailed deer, mule deer, elk, and moose. Since its discovery in 1967, CWD has spread geographically and increased in number. CWD is contagious and can be transmitted through animal-to-animal contact as well as contact with objects or environments contaminated with infectious material including saliva, urine, feces and carcasses.

Deer also carry Lyme disease which is dangerous to humans. Efforts to monitor and control disease transmission require collaboration among wildlife agencies, researchers, and stakeholders to implement effective management strategies.

7:00 White-tailed deer are symbols of North America's natural heritage. By implementing science-based management strategies and working together, we can ensure that white-tailed deer are alive and well for generations to come.

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Listening
grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

UIL LISTENING CONTEST - GRADES 5/6
INVITATIONAL MEET 2024-2025

TEST

"White-Tailed Deer"

1. What is meant by the term "molting" and what is its purpose?
 - A. Molting is when a fawn loses its spots which allows it to hide on the forest floor more effectively.
 - B. Molting is when male deer loses its antlers at the end of the mating season which allows it to move more freely through the forest.
 - C. Molting is when a deer's coat changes from brown to gray in the winter helping them to camouflage more easily.
 - D. Molting is when fawns transition to a diet of vegetation which allows them to leave their mother and begin life as an adult.
2. What is dichromatic vision?
 - A. the ability to see only 2 colors of the primary color spectrum
 - B. the inability to differentiate between all colors of the primary color spectrum
 - C. the ability to see only 3 colors of the primary color spectrum
 - D. the inability to see colors clearly when looking at the primary color spectrum
3. Native Americans considered white-tailed deer to be a symbol of all of the following except
 - A. Strength
 - B. Cunning
 - C. Agility
 - D. Abundance
4. What is one disease carried by white-tailed deer that is dangerous to deer and wildlife?
 - A. Chronic wasting disease
 - B. Lyme disease
 - C. Distemper
 - D. Lymphomatic cancer
5. What does the term "precocial" mean?
 - A. Dependent on an adult of the species for survival for one to two years
 - B. The ability to be camouflaged until old enough to evade predators
 - C. A tendency to remain alone until old enough to socialize with others safely
 - D. Born in an advanced state with the ability to move and feed independently

6. Approximately how many years ago did the white-tailed deer family originate?
- A. 2 million
 - B. 5 million
 - C. 10 million
 - D. 20 million
7. Which of the following does a browser usually not eat?
- A. leaves
 - B. grass
 - C. fruit
 - D. shrubs
8. A typical gestation period for a female deer is _____ days.
- A. 100
 - B. 300
 - C. 200
 - D. 400
9. What is one advantage to white-tailed deer of being crepuscular?
- A. It allows them to see in dim light.
 - B. They are able to rest at night.
 - C. They are able to avoid predators more easily.
 - D. They are able to digest various forms of plants.
10. All of the following are ways that white-tailed deer communicate except
- A. Sound
 - B. Color
 - C. Scratches
 - D. Body Language
11. How do you tell the age of a white-tailed deer?
- A. A younger deer will have a shorter tail.
 - B. An older deer will have a broader stance.
 - C. A younger deer will have sharper hooves.
 - D. An older deer will have a longer snout.
12. At what age are most deer weaned?
- A. 8-10 months
 - B. 10-12 months
 - C. 4-6 months
 - D. 1-2 months
13. The length and branching of males' antlers are determined by all of the following except
- A. Nutrition
 - B. Habitat
 - C. Age
 - D. Genetics
14. What is meant by the term "rut"?
- A. The time when deer breed
 - B. The time males grow antlers
 - C. A disease fawns can carry
 - D. The area females hide their fawns

15. Where is the tarsal gland located?
- A. Behind the left ear
 - B. Between the eyes
 - C. Inside the hind legs
 - D. Underneath the tongue
16. Which of the following is a characteristic of females (does) during mating season?
- A. Vocalizations
 - B. Displays of affection
 - C. Physical combat
 - D. avoidance of aggression
17. Male fawns that are generally about 6-9 months of age during their first winter are sometimes called
- A. Spiked bucks
 - B. spikers
 - C. Nubbin' bucks
 - D. button heads
18. What is a white-tail deer saying if it raises it's tail to show the white side?
- A. I am happy.
 - B. Danger is near.
 - C. It's time for dinner.
 - D. Stay away from me.

True/False

19. Although almost all white-tail deer are herbivores, they have been known to eat birds and mice when they are unable to find food.
20. The Pliocene epoch extended from 7.5 million to 5.3 million years ago and is the most recent of the Miocene Period in the Pleistocene Era.
21. At about one year old, young female white-tailed deer will leave their mothers and strike out on their own.
22. During the breeding season, bucks show dominance over does by using acts of physical aggression and showing off their strength.
23. The coat of a newborn white-tail deer is spotted which provides camouflage against predators.
24. Male white-tail deer regrow their antlers every year.
25. The scent from the tarsal gland is used to warn other deer of their presence as well as to attract mates during the breeding season.

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ LISTENING
INVITATIONAL TEST– GRADES 5 & 6**

Answer Key

“White-Tailed Deer”

- | | |
|-------|-------|
| 1. C | 14. A |
| 2. A | 15. C |
| 3. B | 16. D |
| 4. A | 17. C |
| 5. D | 18. B |
| 6. D | 19. T |
| 7. B | 20. F |
| 8. C | 21. F |
| 9. C | 22. F |
| 10. B | 23. T |
| 11. D | 24. T |
| 12. A | 25. T |
| 13. B | |

UIL LISTENING CONTEST - GRADES 5/6
FALL/WINTER DISTRICT 2024-2025

"Lemons - A Sour Favorite"

Lemons are perhaps one of the most versatile and well-known fruits throughout the world. They are famous for their tartness and are used to enhance the flavors of foods and beverages. Their use in culinary applications, cleaning products, and medicinal properties have left their mark on both our history and our culture. Let's find out the origin of lemons and some of their many uses.

Lemons, scientifically known as *Citrus limon* (lie'-mon), are believed to have originated in India, specifically in the southeast foothills of the Himalayan mountains, about eight million years ago. When the climate changed bringing weaker monsoons and drier weather, the plants were able to spread out of the Himalayas into southeast Asia and later into the rest of the world. In fact, a fossilized citrus leaf was found in southwestern China which dated to at least seven million years ago. From Asia, they spread to the rest of the world, including to Australia, about four million years ago.

1:00 Limons were originally a hybrid between two wild citrus species - the bitter orange and the citron. The citron was the first citrus fruit to reach the Mediterranean and began spreading west. The remains of a citron tree were found in a 2,500-year-old Persian garden near Jerusalem. The limon tree was introduced into southern Italy in 200 AD. Citrons and limons were not widely cultivated in the early Roman empire and were not used in cooking. However, wealthy Romans prized limon trees because they were decorative, had a pleasant odor, and were used as medicine. Around 700 AD, limon trees were being cultivated in Persia, Iraq and Egypt. Like the Roman limon trees, these were also used as an ornamental plant in early Islamic gardens. Believe it or not, tomatoes were also ornamental, not food, plants during this time as well. Between 1000 and 1150 AD, Arab traders distributed the limon around the Mediterranean region.

The first substantial cultivation of lemons in Europe began in Genoa, Italy, in the middle of the 15th century. The name lemon first appeared around 1350-1400 from the middle English word limon. Limon is an Old French word, so it is believed that the lemon entered England from France. The lemon was introduced to the Americas in 1493 when Christopher Columbus carried lemon seeds to Hispaniola.

2:00 In 1747, James Lind's experiments on seamen suffering from scurvy involved adding lemon juice to their diets, though vitamin C was not yet known as an important dietary ingredient. Scurvy is a disease resulting from a lack of vitamin C (ascorbic acid). Early symptoms of deficiency include weakness, fatigue, and sore arms and legs. Without treatment, decreased red blood cells, gum disease, changes to hair, and bleeding from the skin may occur. As scurvy worsens, there can be poor wound healing, personality changes, and finally death from infection or bleeding. Up to that time, scurvy killed more British sailors than wartime enemy action and, as a result, exploration was severely affected. It was mainly by scurvy that George Anson, in his celebrated voyage of 1740–1744, lost nearly two-thirds of his crew (1,300 out of 2,000) within the first 10 months of the voyage. The Royal Navy enlisted 184,899 sailors during the Seven Years' War; 133,708 of these were "missing" or died from disease, and scurvy was the leading cause.

The first major long distance expedition that experienced virtually no scurvy was that of the Spanish naval officer Alessandro Malaspina, 1789–1794. Malaspina's medical officer, Pedro González, was convinced that fresh oranges and lemons were essential for preventing scurvy. Only one outbreak occurred, during a 56-day trip across the open sea. Five sailors came down with symptoms, one seriously. After three days at Guam eating fresh fruit, all five were healthy again.

3:00 Eventually, as colonization spread, lemons made their way to California. During the years 1751-1768, lemon groves were planted in both California and by the 1800s in Florida due to the long growing season. Lemons need a minimum temperature of

around 7 °C (45 °F). However, in the winter of 1894-1895, a killer freeze killed the lemon groves in Florida. The groves were completely wiped out. Because the market was strong in California, planting in Florida did not resume until 1953. At this time, people began to purchase frozen lemon concentrate, frozen orange concentrate, and natural cold-press lemon oil which created a higher demand. Farmers in Florida began to take advantage of the strong demand and once again planted citrus groves.

There are approximately 200 varieties of lemon that can be found in the United States today. Some are best for lemon oil while others are better for juice. Some are more disease resistant, and others bear more fruit or have less seeds. Some grow better in humid climates like Florida, and others thrive in arid climates such as Arizona or Texas. One of the most common lemon varieties is the Eureka lemon, which is characterized

4:00 by its oblong shape, bright yellow skin, and acidic juice. Meyer lemons, on the other hand, are sweeter and rounder with thin orange-yellow skin. These two varieties represent just a fraction of the lemon family.

Lemons are handpicked. They can't be machine harvested and must be picked dry. They are then sorted according to their color, washed, coated with a fungicide to prevent stem-end rot, coated with a thin layer of wax and then stored for shipping. While waiting to be shipped, the lemon cures. During curing, which can take several days, the peel of the picked fruit, which is green, turns yellow and grows thinner. The pulp of the lemon gets juicier as well.

Once you have purchased lemons, how should you store them? Lemons will be juiciest when stored at room temperature. If they need to last longer than a few days, they should be refrigerated. They can last up to a month in the refrigerator, but they should be allowed to warm up to room temperature before using them. Lemon juice can be frozen, but not the whole lemon. Another way to store lemons is to preserve them by combining sliced lemons with salt and sugar in a jar. They will last for at least six months in the refrigerator this way. In Morocco, lemons are preserved in jars or barrels

of salt. The salt penetrates the peel and rind, softening them, and curing them so that they last almost indefinitely.

5:00 Lemons are a rich source of essential nutrients. Their nutritional value includes Vitamin C. Lemons are famous for their high vitamin C content. Vitamin C acts as an antioxidant which protects cells from damage, boosts the immune system and promotes healthy skin. One lemon provides about 31 mg of vitamin C, which is 51% of the recommended daily intake. Research shows that eating fruits and vegetables rich in vitamin C reduces your risk of heart disease and stroke. However, it's not just the vitamin C that makes lemons good for your heart. Lemons also provide fiber and plant compounds that could also significantly lower some risk factors for heart disease. For instance, one study revealed that eating 24 grams of citrus fiber extract daily for a month reduced total blood cholesterol levels.

Lemons also contain citric acid which causes tartness. Citric acid is said to help prevent kidney stones by increasing urine volume and increasing urine pH creating a less favorable environment for kidney stone formation. Some nutritionists believe that just ½ cup of lemon juice per day may provide enough citric acid to help prevent stone formation in people who have already had them. Other vitamins and minerals such as

6:00 vitamin B6, vitamin A, and minerals like potassium and magnesium are found in lemons and contribute to a person's overall health and wellbeing. One other positive benefit of lemons is that they are a low-calorie fruit, making them a healthy choice for those who are looking to maintain or lose weight. Lemons contain only 10% carbs and 90% water. The carbs consist of a few simple sugars and soluble fibers. The soluble fiber is mainly made of pectin which has the added value of lowering the blood sugar. Good news for people with diabetes.

Besides nutritional value, lemon products are used as cleaners. The acidic properties in lemons cause lemon juice to be a great degreaser. The fresh aroma of lemon oil is also used in cleaners to give the impression of a clean, fresh environment. However,

lemons have some unexpected uses as well. One educational science experiment involves attaching electrodes to a lemon and using it as a battery to produce electricity. Although it produces very little power, several lemon batteries linked together could power a small watch. Children have also been known to use lemon juice as invisible ink. They simply dip their paint brush into lemon juice and paint their message on paper. The message can magically be revealed by heating the paper. Lemon juice can also be used to increase the blond color of hair when it is exposed to sunlight. This is due to the citric acid acting as a bleach.

7:00

Whatever your motive for using lemons, it is obvious that lemons, no matter how sour, are a favorite among citrus fruits. Pucker up and enjoy!

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Listening
grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

- 5/6 Fall/Winter 2024-2025 page 2**

17. In Morocco, lemons are preserved in jars or barrels containing _____ which softens the peel and rind.
- | | |
|----------|------------|
| A. sugar | B. vinegar |
| C. water | D. salt |
18. All of the following are nutrients found in lemons except
- | | |
|--------------|--------------|
| A. Potassium | B. Calcium |
| C. Vitamin A | D. Magnesium |

True/False

19. Lemons can be used to produce enough electricity to power a small watch by attaching electrodes to several lemons and linking them together.
20. The lemon was the first citrus fruit to reach the Mediterranean and was introduced into southern Italy in 100 AD.
21. Around 700 AD, tomato bushes were cultivated in Persia and used as decorations as well as food.
22. George Anson lost nearly two thirds of his crew (1300 out of 2000) within the first months of his voyage of 1740-1744 due to scurvy.
23. During the years 1745-1786, lemon groves were planted in both California and Florida due to a drought that had occurred over the rest of the United States.
24. Meyer lemons are sweeter and rounder than the Eureka lemon and have thin orange-yellow skin.
25. Lemons can be frozen and then thawed to use their juice to make concentrate for lemonade and lemon flavoring in baking.

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ LISTENING
FALL/WINTER DISTRICT TEST – GRADES 5 & 6**

Answer Key

“Lemons - A Sour Favorite”

- | | |
|-------|-------|
| 1. B | 14. B |
| 2. C | 15. A |
| 3. A | 16. C |
| 4. B | 17. D |
| 5. D | 18. B |
| 6. B | 19. T |
| 7. A | 20. F |
| 8. D | 21. F |
| 9. C | 22. T |
| 10. B | 23. F |
| 11. C | 24. T |
| 12. D | 25. F |
| 13. D | |

UIL LISTENING CONTEST - GRADES 5/6
SPRING MEET 2024-2025

"Microwave Ovens"

Have you ever had a craving for popcorn? Not a problem, right? Just pop a bag in the microwave, and in no time you've got a big bowl of hot fresh popcorn ready to eat. Most young people couldn't even imagine a home without a microwave. However, it has not always been this way. Actually, the microwave oven has only recently become an essential fixture in modern households. But who was behind its invention, and how did it evolve to revolutionize our daily lives?

Percy Spencer, an American engineer, is often credited as being the inventor of the microwave. Spencer was born in Howland, Maine, in 1894. When he was only eighteen months old, his father died, and his mother left him in the care of his aunt and uncle. His uncle then died when Spencer was only seven years old. At this point, young Percy had no choice but to leave school and find work to support himself and his aunt. From the ages of twelve to sixteen he worked at a spool mill. Later he discovered that a local paper mill was hoping to begin using electricity. No one in his area knew much about electricity, so he began learning as much as possible about it. When he applied to work at the paper mill, he was hired to install electricity in the plant even though he had no formal training in electrical engineering and had not even finished school. At the age of 18, Spencer decided to join the United States Navy. He had become interested in radio communications after hearing about them when the Titanic sank.

1:00

While in the Navy, he made himself an expert on radio technology. He read textbooks on the subject as well as trigonometry, calculus, chemistry, physics, and metallurgy. Radar technology, which utilized microwave frequencies, played a critical role in the war effort. Scientists and engineers explored the properties of microwaves for communication and detection purposes.

After leaving the Navy, Spencer continued to work in the field of radar technology. By 1939, he had become one of the world's leading experts in radar tube design. He was hired to work for Raytheon Company as the chief of the power tube division. It was while he was working for Raytheon that he developed a more efficient way to manufacture magnetrons.

A magnetron is a device that generates high power electromagnetic waves within a vacuum tube. Another name for magnetrons is cavity magnetron because they have empty spaces, or cavities, within the vacuum device. These cavity magnetrons were initially developed for radar systems during the war in 1940. However, building them took time. Using the method developed by Percy Spencer, production of magnetrons increased from 100 to 2600 magnetrons per day.

2:00 In 1945, while conducting an experiment using magnetrons, Spencer noticed that a chocolate bar in his pocket had melted. This was determined to be due to exposure to microwave radiation. He became curious about the cause and then deliberately tested popcorn and an egg, both of which cooked rapidly using the same type of radiation. Recognizing the importance of this accidental discovery, he began to experiment with other food items. He designed a metal box with an opening where microwaves could enter. He placed various food items in the box and was amazed that the microwaves efficiently cooked the food from the inside out.

Microwave cooking operates on a unique scientific principle: the interaction of microwaves with water molecules. Microwaves are electromagnetic waves with a specific frequency that causes water molecules to vibrate rapidly. This vibration generates heat within the food, cooking it from the inside out. That's why when you microwave something like popcorn, it heats quickly from the inside. Popcorn actually pops due to the water content deep inside the kernel. As the water heats, it turns to steam and pops the corn when the pressure inside becomes more than the kernel can contain. Unlike conventional ovens that rely on conduction and convection to transfer

3:00

heat to food, microwaves cook food directly and quickly. This results in faster cooking times and often more even heating, as there's less reliance on external heat sources.

After further testing and building a working prototype, on October 8, 1945, Spencer filed the patent for the first microwave oven.

Despite these events, there is some discussion about whether Spencer actually discovered microwave cooking. At that time it was well known that radio waves would heat dielectric materials. Dielectric materials are insulating materials or materials that are poor conductors of electricity. The use of radio waves to heat these dielectric materials for industrial or medical use was common at that time. The idea of heating food with radio waves was not a new concept either. Bell Labs, General Electric and RCA had all been working on variations of technology to do this for years. In fact, at the 1933 World's Fair in Chicago, Westinghouse demonstrated a 10-kilowatt shortwave radio transmitter that cooked steak and potatoes between two metal plates. In 1947, Grand Central Terminal had a Speedy Weeny vending machine that sold freshly cooked hot dogs using the same concept. However, no patents were filed, and no one really sat up and took notice.

4:00 Because Spencer was working for Raytheon at the time, Raytheon used his research to develop the first commercial microwave oven in 1946. It was called the Radar Range and was designed for use in restaurants and to reheat meals on airplanes. They were huge and expensive appliances that had to be continuously water cooled. The original Radarange was approximately 5 foot 11 inches tall, weighed 750 pounds and cost about \$5,000 each. Compared to today's dollars, that about \$66,000! It consumed 3 kilowatts of energy which is about three times as much as microwaves today.

Raytheon licensed its technology to the Sappan Stove company of Mansfield, Ohio in 1952. They produced a home-use microwave in 1955. Although it was much smaller, it was still too large and expensive to be used at home. Japan's Sharp Corporation began

manufacturing microwave ovens in 1961 and introduced the first microwave oven with a turntable in 1965. This was an effort to promote a more even heating of the food. In 1967, Raytheon acquired Amana Refrigeration, and began to sell Amana Radaranges for \$495. Unlike the Sharp models, a motor driven stirrer in the top of the oven cavity rotated allowing the food to remain stationary. These microwaves were small enough for kitchens and affordable enough for most Americans. After microwave ovens became affordable for residential use, they began to be used in residential and commercial kitchens around the world. Prices fell rapidly during the 1980s. By 1986 roughly one in four American homes owned a microwave oven. By 1997, the U.S. Bureau of Labor Statistics reported that nine out of ten homes had one.

5:00

Because of its increased usage, many people began to wonder about the safety of using microwaves in homes. Safety measures were put in place to protect us from the radio waves. According to the World Health Organization, microwave ovens are safe as long as they are used properly, are maintained, and remain in good condition. While huge amounts of microwave radiation is harmful, microwave ovens are designed to keep the radiation inside. The radiation is only present when the oven is turned on and the door is shut. The microwave oven box is specifically constructed to keep the waves from coming out of the oven. It's like a Faraday cage. A Faraday cage is a box that is built out of materials that prevent electromagnetic waves from passing through. The doors have special seals that prevent leakage. The oven door usually has a window that allows you to see the food, however, it also has a layer of conductive mesh that maintains the shielding. As long as the door is closed, the oven is safe. Many microwave ovens today contain sensors that stop themselves when the food has finished cooking. This allows for cooking with less waste.

6:00

Many restaurants use microwave ovens to heat and reheat food. However, there are other uses besides reheating precooked food or popping popcorn. There are also microwaves that can fry and bake. Some even have a fermentation cycle that can be

used in making fresh dough and yogurt. Microwave ovens are used to dry cork, ceramics, paper, leather, textiles and many other items.

Despite its multiple uses and convenience, the microwave has dealt with its share of controversy. Some concerns have been raised regarding the impact of radio waves on the nutritional value of food and the potential health risks associated with it. Critics argue that food that is exposed to microwave radiation might have less nutritional content. According to most studies, however, this is not the case. While every cooking method can destroy vitamins and nutrients in food, the factors that determine the damage are actually how long the food is cooked, how much liquid is used, and the temperature used to cook.

7:00 Since microwave ovens often use less heat than conventional methods and have shorter cooking times, they are generally less destructive. The most heat-sensitive nutrients are water-soluble vitamins, like folic acid and vitamins B and C, which are most commonly found in vegetables. In studies at Cornell University, scientists discovered that spinach retained nearly all of its nutrients when cooked in a microwave, but it lost about 77 percent when cooked on a stove. Adding water to vegetables when cooking can greatly accelerate the loss of nutrients. Broccoli cooked in a microwave without water retained most of its nutrients.

While the microwave oven has faced criticism and concerns, its influence on our lives today is clear. With continued advancements in technology and environmental responsibility, the future of the microwave oven is sure to be promising.

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Listening
grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

UIL LISTENING CONTEST - GRADES 5/6
SPRING DISTRICT 2024-2025

TEST

"Microwave Ovens"

1. What caused Percy Spencer to study radio communications while in the Navy?
 - A. He read textbooks about it while doing his basic training.
 - B. He became interested in it when he heard about the sinking of the Titanic.
 - C. He was hired by Raytheon Company and needed training.
 - D. He became interested while taking physics classes in high school.
2. At what age did Percy finish school?
 - A. 7
 - B. 12
 - C. 16
 - D. 20
3. Using the method developed by Percy Spencer, production of magnetrons increased from 100 to _____ magnetrons per day.
 - A. 500
 - B. 1800
 - C. 2100
 - D. 2600
4. Microwaves are electromagnetic waves with a specific frequency that
 - A. causes food to spontaneously combust
 - B. creates a radioactive reaction inside a metal chamber
 - C. causes water to vibrate at a high speed
 - D. sound like a high pitched squeal to the naked ear
5. What is one property of dielectric materials?
 - A. They do not conduct electricity well.
 - B. An electrical short may occur when dielectric materials are exposed to water.
 - C. They need heat to create a convection transfer.
 - D. Radio waves cannot cause them to heat up.
6. In what year did Raytheon develop the first commercial microwave oven?
 - A. 1933
 - B. 1946
 - C. 1952
 - D. 1967
7. The original Radarange weighed _____ pounds.
 - A. 500
 - B. 1000
 - C. 750
 - D. 1250

8. By 1986, approximately _____ of homes had a residential microwave.
A. 20% B. 25%
C. 30% C. 50%
9. In what state was Percy Spencer born?
A. Pennsylvania B. Texas
C. Virginia D. Maine
10. What is a Faraday cage?
A. A cage made of materials that allow radio communication to enter
B. A metal grid that creates a magnetic field using an electric charge
C. A box that does not allow electromagnetic waves to pass through
D. A cage that holds in heat while allowing radio waves to pass through
11. In what division did Spencer work for Raytheon when he was hired after leaving the Navy?
A. microwave design B. communication
C. radar technology D. power tubes
12. What does a magnetron generate?
A. electromagnetic waves B. a clean vacuum
C. sonic vibrations D. radioactive steam
13. Before the age of 18, Percy was hired by a factory to
A. run a paper press B. install electricity
C. use radio communication devices D. design electric light fixtures
14. While in the Navy, Percy educated himself by reading textbooks on all of the following topics except
A. Trigonometry B. Calculus
C. Chemistry D. Geology
15. What makes popcorn pop?
A. Water turns to steam and causes pressure inside the kernel.
B. Microwaves cause vibration inside the pulp of the corn.
C. Heat causes the outside of the kernel to crack allowing the pulp to pop.
D. Convection of heat from the outside to the inside releases gaseous pressure.
16. When did Spencer file the patent for the first microwave oven?
A. November 1947 B. April 1939
C. October 1945 D. May 1955

17. Which company produced the first microwave small enough to be used in a home?
- A. Amana Refrigeration
 - B. Sappan Stove Company
 - C. Sharp Corporation
 - D. Raytheon
18. Why do some scientists believe that cooking vegetables in the microwave is better than boiling them in water?
- A. Microwaves cook from the inside out which allows the cook to tell more easily when they are done.
 - B. Cooking in microwaves without water allows less nutrients to cook out.
 - C. Vitamins like folic acid and vitamins B and C become more potent due to the microwaves.
 - D. Studies at Cornell University show that cooking vegetables in water destroys the nutrients.

True/False

19. The first Radarange was approximately 5 foot 11 inches tall and cost about \$5,000 each which would be approximately \$66,000 in today's economy.
20. Scientists and engineers discovered that microwaves were good for cooking food and then realized that the properties of microwaves could be used for communication and detection purposes during the war.
21. Another name for magnetrons is cavity magnetron because they have empty spaces, or cavities, within the vacuum device.
22. Unlike conventional ovens that rely on conduction and convection to transfer heat to food, microwaves cook food directly and quickly and often have more even heating.
23. Although there was some use of dielectric materials for heating, no one considered using microwaves for cooking food until Percy Spencer filed his patent.
24. Japan's Sharp Corporation began manufacturing microwave ovens in 1961 and introduced the first microwave oven with a turn table in 1965.
25. According to the World Health Organization, microwave ovens are only considered safe when the door is closed which keeps any residual radiation from leaking out whether the oven is turned on or not.

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ LISTENING
SPRING DISTRICT TEST – GRADES 5 & 6**

Answer Key

“Microwave Ovens”

- | | |
|-------|-------|
| 1. B | 14. D |
| 2. A | 15. A |
| 3. D | 16. B |
| 4. C | 17. A |
| 5. A | 18. B |
| 6. B | 19. T |
| 7. C | 20. F |
| 8. B | 21. T |
| 9. D | 22. T |
| 10. C | 23. F |
| 11. D | 24. T |
| 12. A | 25. F |
| 13. B | |

CONTESTANT NUMBER:

FOR GRADER USE ONLY

Score Test Below:

_____ Initials _____

_____ Initials _____

Papers contending to place:

_____ Initials _____



**University Interscholastic League
A+ Maps/Graphs/Charts Contest • Answer Sheet**

Write your contestant number in the upper right corner, and circle your grade below.

Circle Grade Level: 5 6 7 8

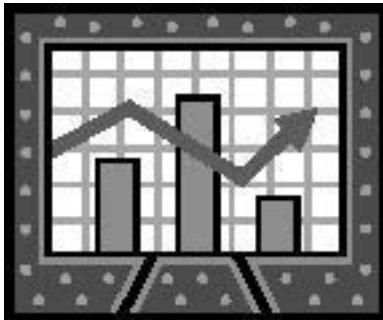
- | | | |
|----------------------|----------------------|----------------------|
| 1. A B C D | 26. T F | 51. A B C D |
| 2. A B C D | 27. T F | 52. A B C D |
| 3. A B C D | 28. T F | 53. A B C D |
| 4. A B C D | 29. T F | 54. A B C D |
| 5. A B C D | 30. T F | 55. A B C D |
| 6. A B C D | 31. A B C D | 56. T F |
| 7. A B C D | 32. A B C D | 57. T F |
| 8. A B C D | 33. A B C D | 58. T F |
| 9. A B C D | 34. A B C D | 59. T F |
| 10. A B C D | 35. A B C D | 60. T F |
| 11. A B C D | 36. A B C D | 61. A B C D |
| 12. A B C D | 37. A B C D | 62. A B C D |
| 13. A B C D | 38. A B C D | 63. A B C D |
| 14. A B C D | 39. A B C D | 64. A B C D |
| 15. A B C D | 40. A B C D | 65. A B C D |
| 16. A B C D | 41. T F | 66. A B C D |
| 17. A B C D | 42. T F | 67. A B C D |
| 18. A B C D | 43. T F | 68. A B C D |
| 19. A B C D | 44. T F | 69. A B C D |
| 20. A B C D | 45. T F | 70. A B C D |
| 21. A B C D | 46. A B C D | 71. T F |
| 22. A B C D | 47. A B C D | 72. T F |
| 23. A B C D | 48. A B C D | 73. T F |
| 24. A B C D | 49. A B C D | 74. T F |
| 25. A B C D | 50. A B C D | 75. T F |

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Maps, Graphs & Charts

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

This page is intentionally blank.

Europe Political Relief Map

1. How far is it from the capital of Poland to the capital of Belarus?
 - a. About 150 miles
 - b. About 300 miles
 - c. About 1,000 miles
 - d. About 2,000 miles
2. Which mountain range forms the natural border between Italy and Switzerland?
 - a. Pyrenees
 - b. Carpathians
 - c. Alps
 - d. Apennines
3. Which river runs through the city of Vienna, Austria?
 - a. Rhine
 - b. Elbe
 - c. Danube
 - d. Seine
4. Which peninsula contains Spain and Portugal?
 - a. Balkan Peninsula
 - b. Iberian Peninsula
 - c. Apennine Peninsula
 - d. Scandinavian Peninsula
5. What large island is located to the west of Great Britain?
 - a. Iceland
 - b. Ireland
 - c. Sardinia
 - d. Corsica
6. Canals are not found in which of the following?
 - a. Germany
 - b. France
 - c. Estonia
 - d. Russia
7. Which city in Russia has a population of over one million?
 - a. Donetsk
 - b. Penza
 - c. Murmansk
 - d. None of the above
8. Which country is bordered by both the Adriatic Sea and the Ionian Sea?
 - a. Netherlands
 - b. Italy
 - c. Malta
 - d. Croatia
9. The Faroe Islands are a territory of what country?
 - a. Russia
 - b. Ukraine
 - c. United Kingdom
 - d. Denmark
10. Which longitude line is equivalent to the Prime Meridian?
 - a. 0° E/W
 - b. 10° E
 - c. 20° E
 - d. 30° E
11. Which of the following countries is not transcontinental?
 - a. Russia
 - b. Turkey
 - c. Spain
 - d. Kazakhstan
12. Which country has fjords (sometimes spelled “fiords”) along its coast?
 - a. Sweden
 - b. Norway
 - c. Finland
 - d. Denmark
13. The Gulf of Finland is just north of what country?
 - a. Finland
 - b. Russia
 - c. Sweden
 - d. Estonia
14. Which of the following is a small country within Italy’s borders?
 - a. Turin
 - b. Madrid
 - c. Lichtenstein
 - d. San Marino
15. Which country’s capital is the furthest west?
 - a. Russia
 - b. Ireland
 - c. Portugal
 - d. Iceland

BEACH FITNESS COMPLEX

Hours: Daily 8am to 8 pm
(Extended hours for special events)

- 1 Tennis Courts
- 2 Vendors
- 3 Picnic Area
- 4 Open Gym
- 5 Beach Volleyball
- 6 Group Fitness
- 7 Main Stage Zone
- 8 Soccer
- 9 Basketball
- 10 Chess
- 11 Playground
- 12 Loungers
- 13 Cabanas
- 14 Windsurfing & Canoe
- + First Aid
- P Parking
- RR Restrooms
- i Registration/Info



Beach Fitness Complex

16. The Loungers are located in which direction from the Playground?

- a. Northeast
- b. Southwest
- c. Northwest
- d. Southeast

17. The Playground is located next to which of the following?

- a. Open Gym
- b. Cabanas
- c. Beach Volleyball
- d. All of the above

18. Which activity is located the furthest northwest?

- a. Beach Volleyball
- b. Windsurfing and Canoe
- c. Group Fitness
- d. Chess

19. What time does the complex close during special events?

- a. 8a.m.
- b. 9 p.m.
- c. 12 a.m.
- d. Not indicated

20. Vendors are located in how many different sections?

- a. 1
- b. 3
- c. 5
- d. 7

21. The Main Stage is located in what section of the complex?

- a. Northeast
- b. Northwest
- c. Southeast
- d. Southwest

22. How many activities are located west of the Tennis Courts?

- a. 0
- b. 1
- c. 5
- d. 10

23. Leaving the complex via Sand Lane takes you in what direction?

- a. Northeast
- b. Northwest
- c. Southeast
- d. Southwest

24. Which activity has the most amount of fields/courts?

- a. Baseball
- b. Soccer
- c. Beach Volleyball
- d. Tennis

25. Which activity is located directly east of Restrooms?

- a. Tennis
- b. Group Fitness
- c. Open Gym
- d. Playground

TRUE/FALSE

26. The complex has the same hours every day.

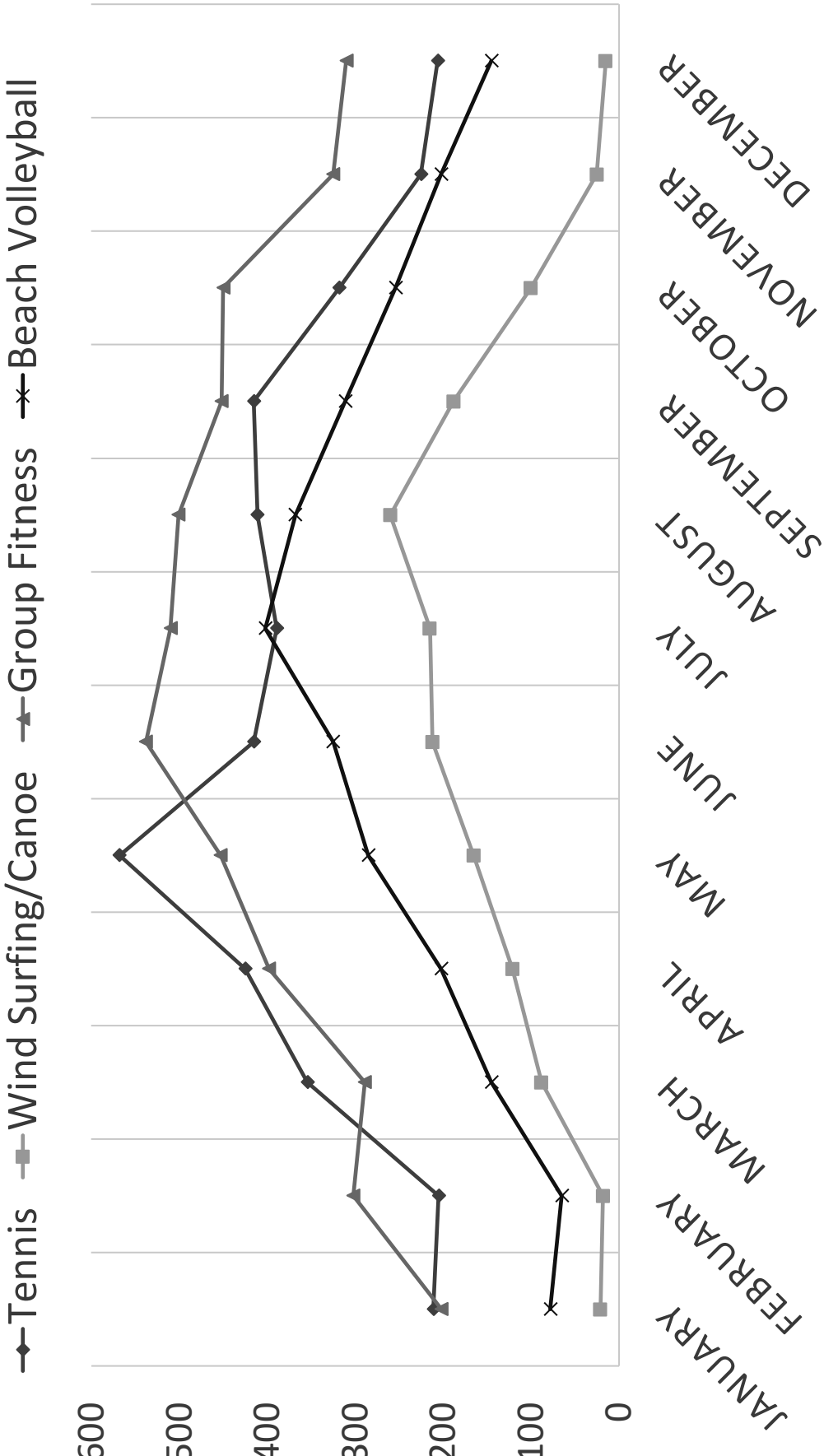
27. Registration and information is located next to the parking lot.

28. The complex is closed on Sundays.

29. The complex is located south of Sand Lane.

30. The Group Fitness area is located in the northwest part of the map.

BEACH ACTIVITY PARTICIPATION - 2023



Beach Activity Participation 2023

31. Which activity had the highest participation in June?
- Tennis
 - Wind Surfing/Canoe
 - Group Fitness
 - Beach Volleyball
32. How many activities saw their lowest participation February?
- 0
 - 1
 - 2
 - 3
33. Which activity saw the biggest increase in participation from May to June?
- Tennis
 - Wind Surfing/Canoe
 - Group Fitness
 - Beach Volleyball
34. What was the total participation for Wind Surfing/Canoe in the summer months of June, July and August?
- About 300
 - About 500
 - About 700
 - About 900
35. How many activities had participation rates above 300 in more than six months?
- 0
 - 1
 - 2
 - 4
36. Which activity had the lowest total participation for the first half of the year?
- Tennis
 - Wind Surfing/Canoe
 - Group Fitness
 - Beach Volleyball
37. How many activities had a total participation of over 4000 for the year??
- 1
 - 2
 - 3
 - 4
38. Which month saw the highest combined participation for Tennis and Group Fitness?
- March
 - May
 - August
 - October
39. What amount of time is covered by this graph?
- One month
 - Twelve months
 - Twenty-four months
 - Not indicated
40. What activity had the largest difference between its highest and lowest months of participation?
- Tennis
 - Wind Surfing/Canoe
 - Beach Volleyball
 - Not indicated
- TRUE/FALSE**
41. Participation in Beach Volleyball increased for the first six months of the year.
42. The line with the triangle represents the number of participants in Group Fitness.
43. Tennis was the second most popular activity more times than any other activity.
44. December saw the lowest amount of participation on all activities.
45. Beach Volleyball participation remained above 300 most months.

This page is intentionally blank.

Europe (Various Maps)

46. Wetlands can be found in the northern area of what country?

- a. Ireland
- b. Spain
- c. Russia
- d. Turkey

47. Which country has areas of ranching or herding?

- a. Kosovo
- b. Poland
- c. Iceland
- d. None of the above

48. Which Russian city is closest to Lake Ilmen?

- a. Kola
- b. Pskov
- c. Kem
- d. Tartu

49. Which of the following countries sources less than 5% of its electricity generation from fossil fuels?

- a. Norway
- b. Poland
- c. France
- d. Austria

50. What natural formation separates European Russia and Asian Russia?

- a. Caspian Sea
- b. Volga River
- c. Russia isn't in Europe
- d. Ural Mountains

51. What Polish city has the highest population?

- a. Radom
- b. Elblag
- c. Hamburg
- d. Lodz

52. The longest river on the continent flows through which country?

- a. Russia
- b. Finland
- c. Ukraine
- d. All of the above

53. Which of the following is the land most recently reclaimed from the North Sea?

- a. Frisian Islands
- b. Flevoland
- c. Shetland Islands
- d. Kolguyev Island

54. Which county gets the highest percentage of its electricity production from fossil fuels?

- a. Poland
- b. Austria
- c. Norway
- d. France

55. Which of the following is responsible for the mild climate of northern Europe?

- a. Gulf Stream
- b. North Atlantic Drift
- c. Guinea Current
- d. North Equatorial Current

TRUE/FALSE

56. Asian Russia has a higher land area than European Russia but less of a population.

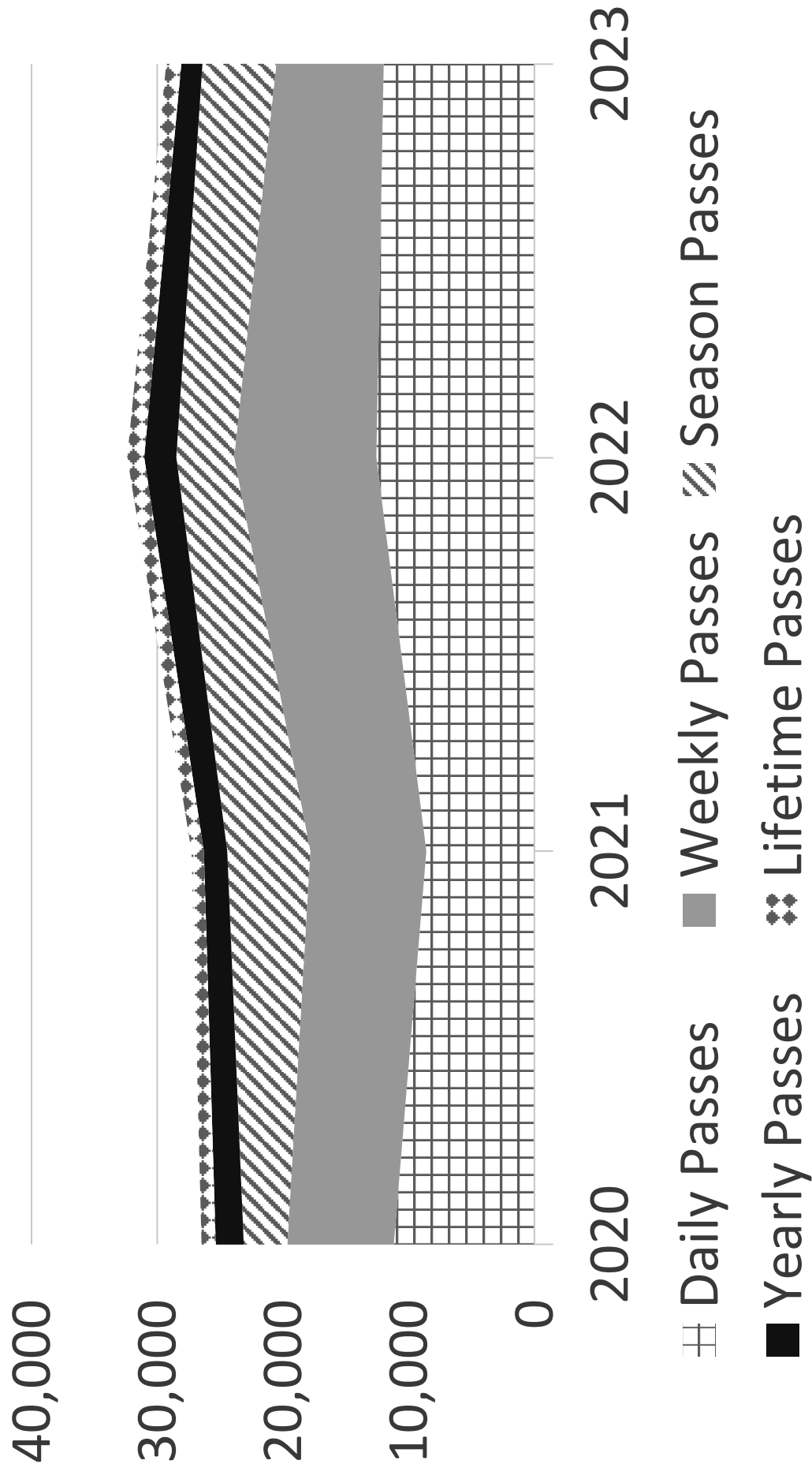
57. The capitals of Latvia and Estonia are both on the shores of the Gulf of Riga.

58. Mt. Elbrus is located in western France.

59. Tundra can only be found in one European country.

60. Moscow has the busiest airport in Europe.

Resort Pass Sales



Resort Pass Sales

61. About how many yearly passes were sold in 2023?
- About 1,000
 - About 1,500
 - About 3,000
 - About 4,000
62. In which year was the total number of passes sold (across all types) the lowest?
- 2020
 - 2021
 - 2022
 - 2023
63. In which year was the difference between season and yearly pass sales the largest?
- 2020
 - 2021
 - 2022
 - 2023
64. What does the x-axis represent?
- The type of pass
 - The number of passes sold
 - The year
 - None of the above
65. In how many years did daily passes exceed 10,000?
- 0
 - 1
 - 3
 - 4
66. Which pass type had the lowest sales in 2022?
- Daily passes
 - Weekly passes
 - Lifetime passes
 - Yearly passes
67. Which type of pass brings in the most revenue on a yearly basis?
- Daily passes
 - Yearly passes
 - Preston County Fair
 - Not indicated
68. In which year did season passes outsell weekly passes?
- 2020
 - 2021
 - 2022
 - None of the above
69. Which pass type showed the greatest increase from 2020 to 2021?
- Yearly passes
 - Daily passes
 - Season passes
 - Lifetime passes
70. What was the trend for lifetime passes from 2020 to 2023?
- Steady increase
 - Steady decrease
 - Fluctuating with no clear trend
 - Increase during odd years compared to the year prior
- TRUE/FALSE**
71. The graph indicates that most season passes were sold during the summer months.
72. The graph covers five years' worth of data.
73. Weekly pass sales increased every year from 2020 to 2022.
74. Daily pass sales were higher than season pass sales in all four years.
75. The combined sales of weekly and season passes exceeded the sales of daily passes in 2022.

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ MAPS/GRAPHS/CHARTS
INVITATIONAL TEST – GRADES 5 & 6**

Answer Key

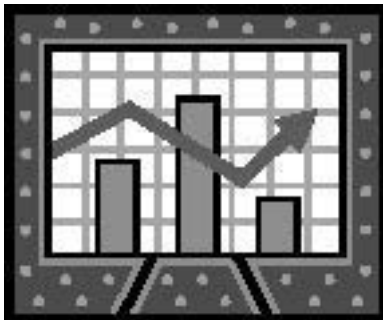
1. B	26. F	51. D
2. C	27. T	52. A
3. C	28. F	53. B
4. B	29. F	54. A
5. B	30. F	55. B
6. C	31. C	56. T
7. D	32. C	57. F
8. B	33. C	58. F
9. D	34. C	59. F
10. A	35. C	60. F
11. C	36. B	61. B
12. B	37. B	62. A
13. D	38. B	63. B
14. D	39. B	64. C
15. D	40. A	65. C
16. D	41. F	66. C
17. D	42. T	67. D
18. B	43. T	68. D
19. D	44. F	69. C
20. B	45. F	70. C
21. B	46. C	71. F
22. A	47. C	72. F
23. C	48. B	73. T
24. C	49. A	74. T
25. A	50. D	75. T

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Maps, Graphs & Charts

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

This page is intentionally blank.

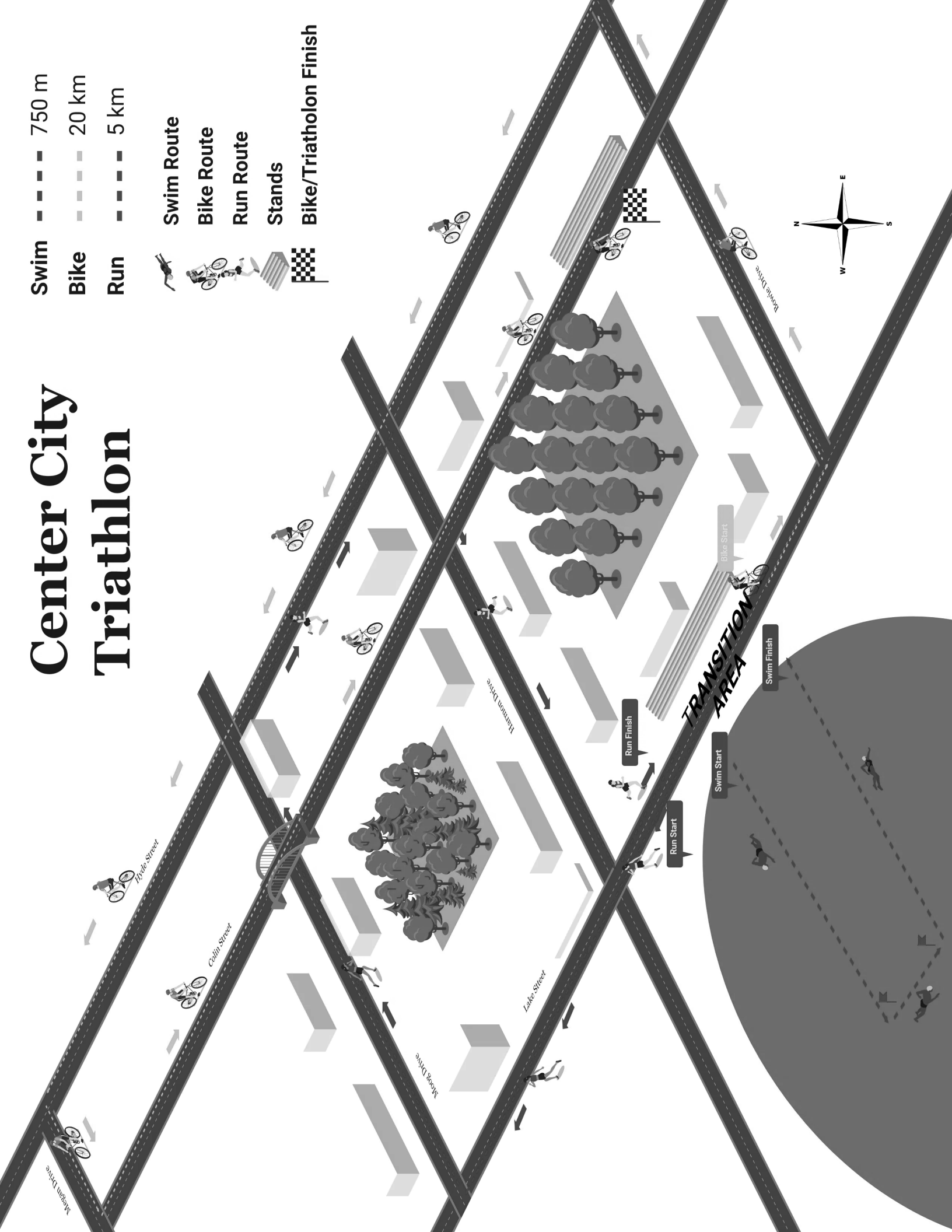
South America Political Relief Map

1. Which Brazilian city is closest to the Equator?
 - a. Macapa
 - b. Belem
 - c. Manaus
 - d. Iquitos
2. What is the approximate distance between the capitals of Venezuela and Colombia?
 - a. About 300 miles
 - b. About 600 miles
 - c. About 900 miles
 - d. About 1200 miles
3. If you travel east from Asuncion, what is the first bordering country you would cross into?
 - a. Argentina
 - b. Paraguay
 - c. Brazil
 - d. Paraguay
4. Which three countries don't meet at a single shared point?
 - a. Guyana, Suriname, and Brazil
 - b. Argentina, Brazil, and Uruguay
 - c. Bolivia, Argentina, and Paraguay
 - d. Paraguay, Argentina, and Uruguay
5. Which city is located at approximately 12°S, 77°W?
 - a. Lima
 - b. Bogota
 - c. Santiago
 - d. Quito
6. Which of the following cities has a population over 1,000,000?
 - a. Cusco, Peru
 - b. La Plata, Argentina
 - c. São Paulo, Brazil
 - d. Bucaramanga, Colombia
7. What is the southernmost country in South America?
 - a. Chile
 - b. Argentina
 - c. Venezuela
 - d. Peru
8. Which river forms part of the border between Peru and Colombia?
 - a. Amazon
 - b. Orinoco
 - c. Paraná
 - d. Putumayo
9. Which mountain range runs along the western coast of South America?
 - a. Andes
 - b. Rocky Mountains
 - c. Alps
 - d. Himalayas
10. The island of Trindade is a territory of what country?
 - a. Brazil
 - b. Colombia
 - c. Argentina
 - d. Peru
11. Which of these cities is not located in Argentina?
 - a. Cordoba
 - b. Rosario
 - c. Montevideo
 - d. Mar del Plata
12. Which country is located entirely north of the equator?
 - a. Brazil
 - b. Bolivia
 - c. Colombia
 - d. Suriname
13. Which of these Colombian cities is located on the Caribbean coast?
 - a. Cali
 - b. Bucaramanga
 - c. Medellin
 - d. Barranquilla
14. What does a blue line intersected by two small blue lines indicate?
 - a. River
 - b. Canal
 - c. Waterfalls
 - d. None of the above
15. Seasonal lakes can be found in which of the following countries?
 - a. Bolivia
 - b. Argentina
 - c. Chile
 - d. All of the above

Center City Triathlon

- Swim - - - 750 m
- Bike - - - 20 km
- Run - - - 5 km

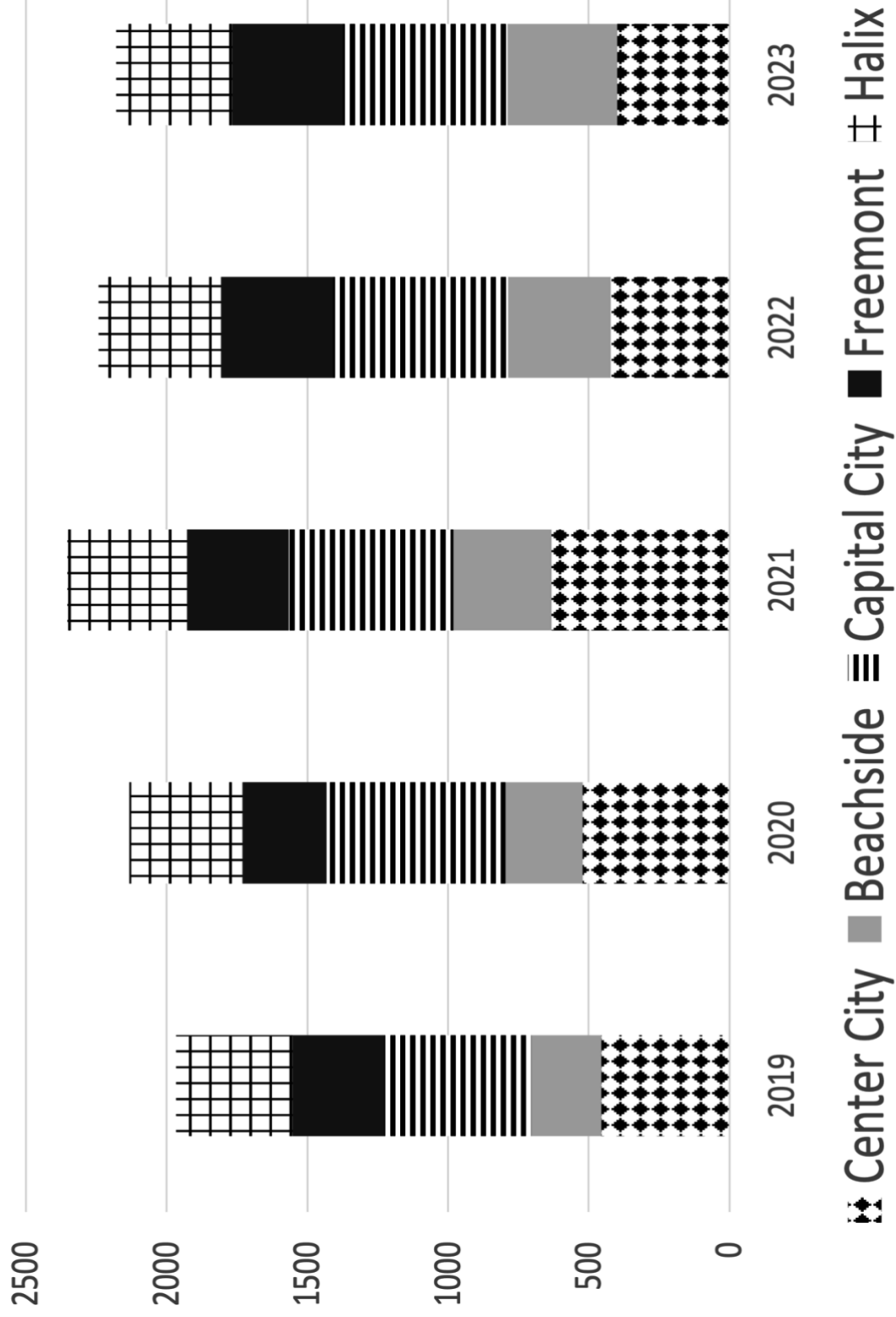
- Swim Route
- Bike Route
- Run Route
- Stands
- Bike/Triathlon Finish



Center City Triathlon

16. On which street does the Run Route start?
- Center Street
 - Maple Drive
 - Lake Street
 - Hoover Street
17. Which direction does the Bike Route go on Megan Drive?
- Northwest
 - Northeast
 - Southeast
 - Southwest
18. What is located directly south of the Transition Area?
- Run start
 - Triathlon Finish
 - Harmon Drive
 - None of the above
19. Which indicator from the legend does not appear on the map?
- Triathlon Finish
 - Dotted line running path
 - Stands
 - Bridge
20. Which route crosses the ColinStreet bridge?
- Swim Route
 - Run Route
 - Bike Route
 - All of the above
21. Which street does the Run Route cross twice?
- Megan Drive
 - Bowie Drive
 - Hyde Street
 - None of the above
22. In what directions will athletes be going when they cross the triathlon finish line?
- Northwest
 - Northeast
 - Southeast
 - Southwest
23. In how many different areas are stands located?
- 0
 - 1
 - 2
 - 3
24. Which route has the athletes moving in a southeast direction?
- Swim Route
 - Run Route
 - Bike Route
 - All of the above
25. The triathlon ends on what street?
- Hyde Street
 - Colin Street
 - Lake Street
 - Moog Drive
- TRUE/FALSE**
26. The Swim Route is the shortest part of the Triathlon.
27. All of the different routes either start or end on Harmon Drive.
28. Runners will run in both directions on Lake Street.
29. The Swim Route takes athletes the furthest south.
30. Audience members in the stands on Lake Street will have the best view of the finish line.

Triathlon Participation By City



Triathlon Participation by City

31. What span of time is covered in the data?
- 5 months
 - 5 years
 - 50 years
 - Not indicated
32. Which city had the highest participation in 2021?
- Center City
 - Beachside
 - Capital City
 - Freemont
33. Which city had the least amount of difference between their highest and lowest participation years?
- Beachside
 - Capital City
 - Freemont
 - Halix
34. In what year did Capital City have its highest amount of participation?
- 2019
 - 2020
 - 2021
 - 2022
35. How many cities saw an increase in participation every year?
- 0
 - 1
 - 2
 - 3
36. In which year was the participation difference between Freemont and Halix the smallest?
- 2019
 - 2020
 - 2021
 - 2023
37. In what year was overall participation the lowest?
- 2019
 - 2020
 - 2021
 - 2022
38. On average, which city participated the most from 2019-2023?
- Capital City
 - Freemont
 - Beachside
 - Center City
39. In how many years did Center City participation exceed 500?
- 0
 - 1
 - 2
 - 4
40. Which city had the lowest cumulative participants across all years?
- Center City
 - Beachside
 - Capital City
 - Freemont
- TRUE/FALSE**
41. Center City had the most number of participants most years.
42. Halix participation numbers had the least amount of variation over the time covered in the data.
43. Freemont always had less participants than Capital City every year.
44. Total participation for all cities combined stayed above 2,000 every year.
45. In 2019, the difference between the city with the highest participation and the city with the lowest participation was above 300.

This page is intentionally blank.

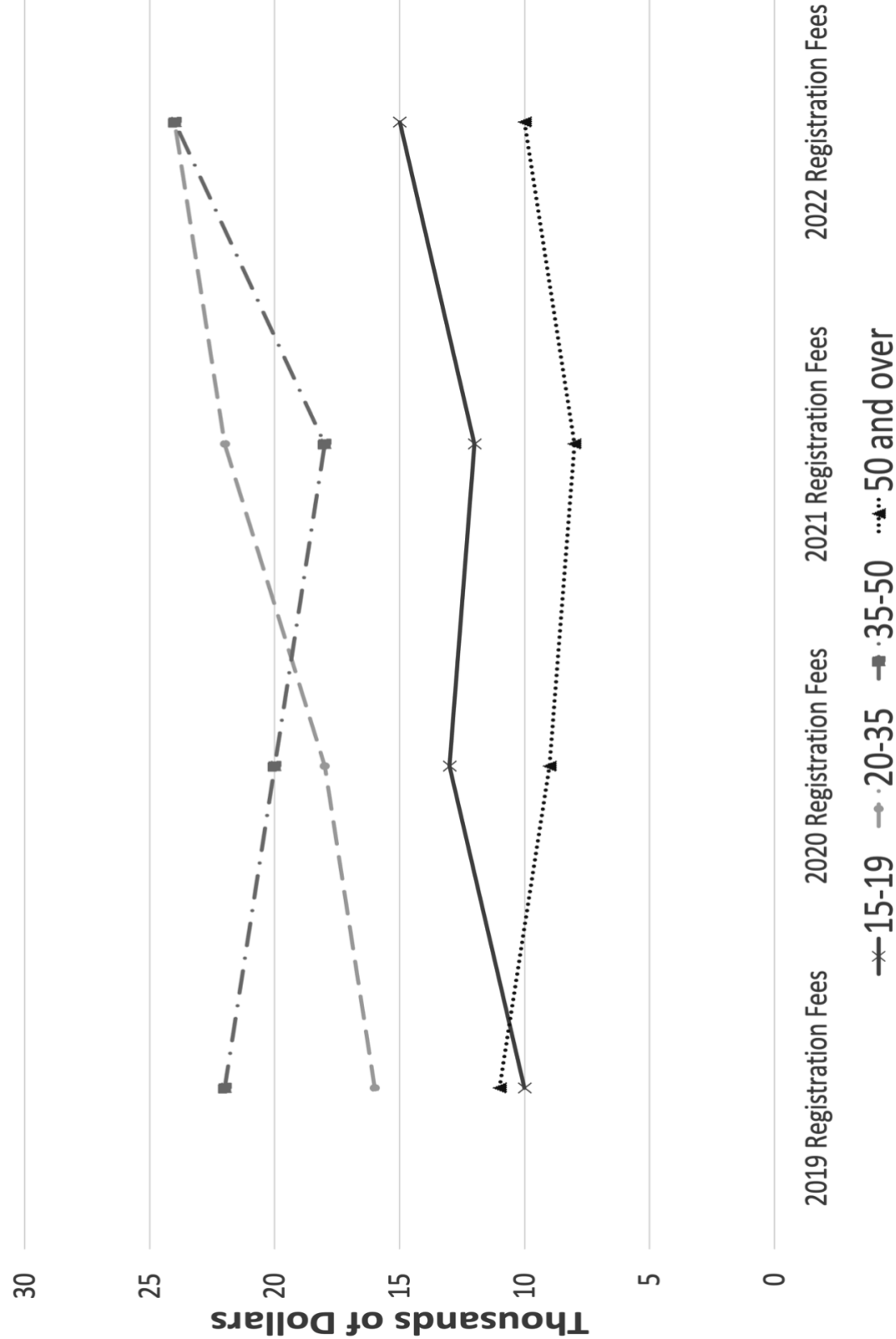
South America (Various Maps)

46. Of the following, which country in South America has the highest birth rate?
- Bolivia
 - Brazil
 - Peru
 - Mexico
47. About what percentage of Brazil's land cover is rainforest?
- 40%
 - 50%
 - 60%
 - 70%
48. Which of the following ethnicities is the largest in Peru?
- Aymara
 - European
 - Mestizo
 - Quechua
49. Which of the following areas of South America has the densest population?
- Southern Argentina
 - Central Brazil
 - Northern Paraguay
 - Western Brazil
50. On which of the following maps does one inch equal the most miles?
- Northwestern South America
 - Southern South America
 - Brazil and Its Neighbors
 - They are all equal
51. Which country has the highest percentage of descendants of indigenous South Americans?
- Brazil
 - Ecuador
 - Venezuela
 - Uruguay
52. The Serra do Espinhaco is located in what country?
- Bolivia
 - Guyana
 - Chile
 - None of the above
53. The largest lake in the region is located in what country?
- Venezuela
 - Brazil
 - Argentina
 - Chile
54. Which of these cities is NOT a national capital?
- Asuncion
 - Montevideo
 - Curitiba
 - Caracas
55. Tundra can't be found in which of the following countries?
- Bolivia
 - Colombia
 - Ecuador
 - Uruguay

TRUE/FALSE

56. Lake Titicaca is located on the border of Peru and Bolivia.
57. Argentina's climate is predominantly tropical.
58. Venezuela is a member of OPEC.
59. The Galapagos Islands are part of Ecuador.
60. The main land use around the Amazon River in Brazil is forestry.

Registration Fees by Year



Entry Fee Revenue

61. What is represented by the dotted line with the triangle?
- 2020 registration fees
 - 2021 registration fees
 - The 35-50 age group
 - The 50 and over age group
62. Which age group took in the most in registration fees over the time covered by the graph?
- 15-19
 - 20-35
 - 35-50
 - 50 and over
63. How many age groups brought in more than \$2,000 in a single year?
- 0
 - 1
 - 3
 - 4
64. What year shows the most growth in the 35-50 group compared to the previous year?
- 2019
 - 2020
 - 2021
 - 2022
65. How many age groups never fell below \$10,000 in registration fees in a single year?
- 0
 - 1
 - 2
 - 3
66. In what year did the 20-35 group raise about \$22,000?
- 2019
 - 2020
 - 2021
 - 2022
67. What does the x-axis represent?
- Thousands of dollars
 - The year
 - Age groups
 - Not indicated
68. Which age group had the most number of individual participants in 2021?
- 15-19
 - 20-35
 - 35-50
 - Not indicated
69. In how many years did the youngest age group raise the least amount of registration fees?
- 0
 - 1
 - 2
 - 3
70. The registration fees for how many age groups peaked in 2022?
- 0
 - 1
 - 2
 - 3
- TRUE/FALSE**
71. Over the time covered by the graph, the 50 and over age group registration fees were over \$40,000.
72. The graph indicates that the 20-35 age group is the only group that increased in the amount of registration fees every year.
73. The 35-50 age group raises at least twice as much money each year as the 50 and over age group.
74. The greatest increase in dollars raised between 2019 and 2020 was by the 35-50 age group.
75. The only decrease in total registration fees across all ages occurred in 2022.

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ MAPS/GRAPHS/CHARTS
FALL/WINTER DISTRICT TEST – GRADES 5 & 6**

Answer Key

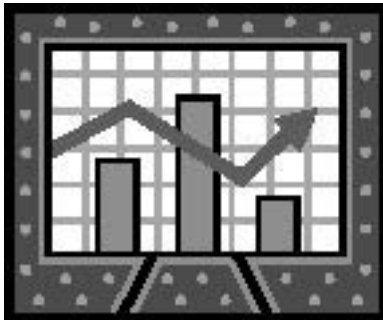
1. A	26.T	51.B
2. B	27.F	52.D
3. C	28.T	53.A
4. D	29.T	54.C
5. A	30.F	55.D
6. C	31.B	56.T
7. A	32.A	57.F
8. D	33.D	58.T
9. A	34.B	59.T
10.A	35.B	60.T
11.C	36.D	61.D
12.D	37.A	62.C
13.D	38.A	63.D
14.C	39.C	64.D
15.D	40.B	65.D
16.C	41.F	66.C
17.D	42.T	67.B
18.D	43.T	68.D
19.B	44.F	69.B
20.C	45.F	70.D
21.D	46.A	71.F
22.C	47.C	72.T
23.C	48.D	73.T
24.D	49.B	74.F
25.B	50.B	75.F

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Maps, Graphs & Charts

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

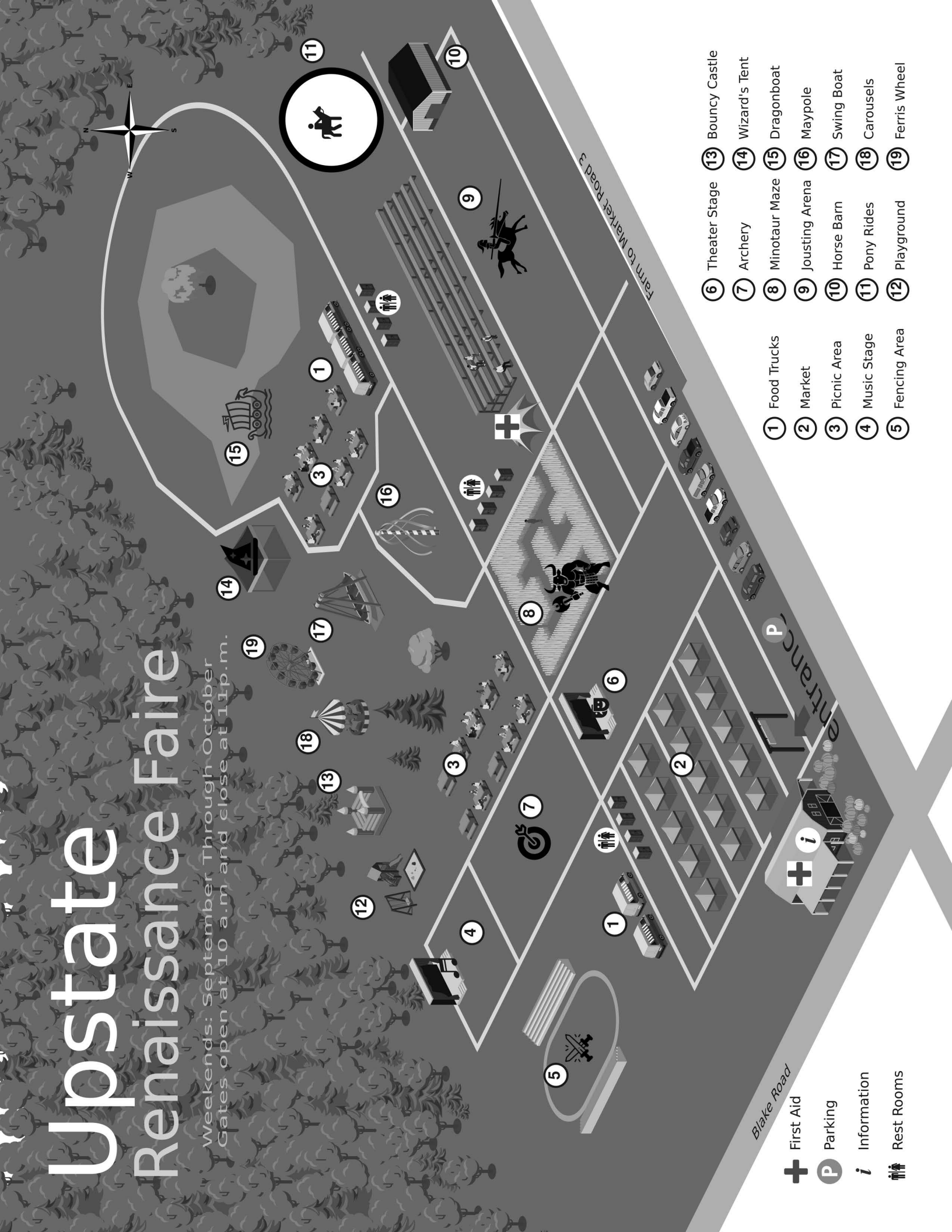
This page is intentionally blank.

Asia Political Relief Map

1. Which country is bordered by both China and India?
 - a. Bhutan
 - b. Turkey
 - c. Cambodia
 - d. Bangladesh
2. How far is it from the capital of Yemen to the capital of Oman?
 - a. About 600 miles
 - b. About 1,200 miles
 - c. About 1,500 miles
 - d. About 2,000 miles
3. Of the following, which city in Russia has the smallest population?
 - a. Shache
 - b. Aral
 - c. Irkutsk
 - d. Chita
4. The Ganges River primarily flows through which country?
 - a. India
 - b. Indonesia
 - c. China
 - d. None of the above
5. Which country is bicontinental?
 - a. Turkey
 - b. Russia
 - c. Kazakhstan
 - d. All of the above
6. Which island is part of Indonesia?
 - a. Sri Lanka
 - b. Taiwan
 - c. Sakhalin
 - d. None of the above
7. Which country has a coastline on the Persian Gulf?
 - a. Uzbekistan
 - b. Afghanistan
 - c. Iraq
 - d. Tajikistan
8. Which country is located at approximately 4°N and 74°E?
 - a. Malaysia
 - b. Maldives
 - c. Uzbekistan
 - d. Cambodia
9. Where is the Grand Canal located?
 - a. Northern Russia
 - b. Southern Russia
 - c. Eastern China
 - d. Western China
10. Nicobar Island is a territory of what country?
 - a. India
 - b. Russia
 - c. China
 - d. Indonesia
11. The Himalayas extend into which of the following countries?
 - a. Bhutan
 - b. Nepal
 - c. India
 - d. All of the above
12. What body of water separates Oman from Iran?
 - a. Persian Gulf
 - b. Caspian Sea
 - c. Black Sea
 - d. Gulf of Oman
13. Which of the following is designated on the map as a small country?
 - a. North Korea
 - b. Tehran
 - c. Singapore
 - d. Georgia
14. Which river is just north of the Taklimakan Desert?
 - a. Lena River
 - b. Tarim River
 - c. Tigris River
 - d. Ob River
15. Of the following, which country capital is closest the Equator?
 - a. Ashgabat
 - b. Padang
 - c. Muscat
 - d. Ankara

Upstate Renaissance Faire

Weekends: September Through October
 Gates open at 10 a.m. and close at 11 p.m.



- 1 Food Trucks
- 2 Market
- 3 Picnic Area
- 4 Music Stage
- 5 Fencing Area
- 6 Theater Stage
- 7 Archery
- 8 Minotaur Maze
- 9 Jousting Arena
- 10 Horse Barn
- 11 Pony Rides
- 12 Playground
- 13 Bouncy Castle
- 14 Wizard's Tent
- 15 Dragonboat
- 16 Maypole
- 17 Swing Boat
- 18 Carousels
- 19 Ferris Wheel

- First Aid
- Parking
- Information
- Rest Rooms

Upstate Renaissance Faire

16. During which month does the faire take place?

- a. January
- b. July
- c. October
- d. December

17. How many food truck areas are marked on the map?

- a. 0
- b. 1
- c. 2
- d. 3

18. Which of the following is located nearest the entrance of the faire?

- a. Minotaur Maze
- b. Jousting Area
- c. Market
- d. Playground

19. Which attraction is located the furthest north?

- a. Dragonboat
- b. Musical stage
- c. Maypole
- d. Information center

20. Which of the following attractions requires the most tickets?

- a. Pony ride
- b. Bouncy castle
- c. Wizard's Tent
- d. Not indicated

21. From what road is parking accessible?

- a. FM Blake
- b. Blake
- c. FM 3
- d. Not indicated

22. Where is the Fencing Arena located?

- a. Just south of the Theatre Stage
- b. Just north of the Minotaur Maze
- c. Just south of the Music Stage
- d. Just west of the Jousting Arena

23. How many picnic areas are located southeast of the parking area?

- a. 0
- b. 1
- c. 2
- d. 3

24. What time do gates open on Thursdays?

- a. 10 a.m.
- b. 4 p.m.
- c. Not open on Thursdays
- d. Not indicated

25. Which of the following activities is closest to a First Aid station?

- a. Jousting Arena
- b. Ferris Wheel
- c. Music Stage
- d. Playground

TRUE/FALSE

26. The fair is located at the southern corner of Blake Road and FM 3.

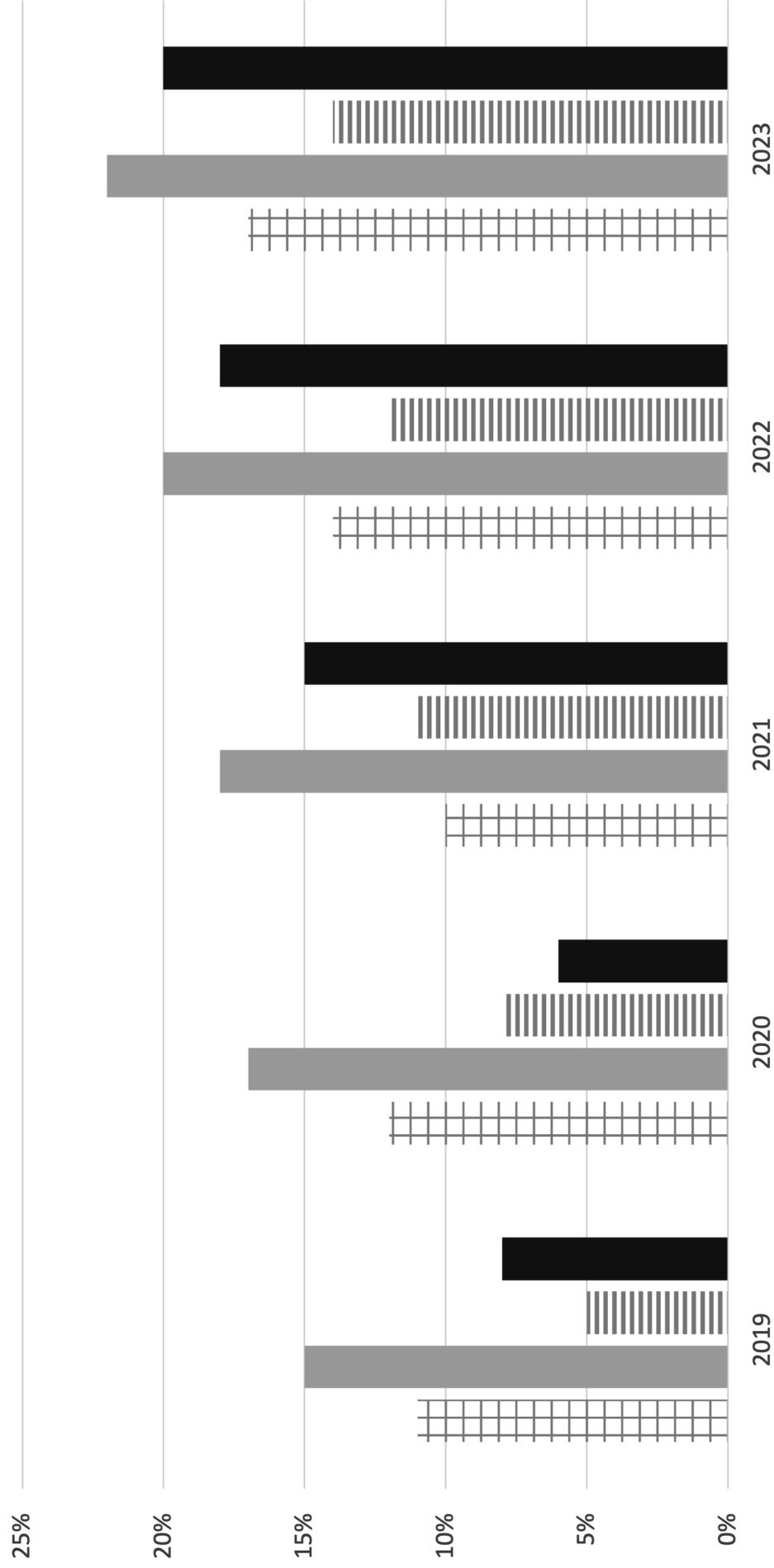
27. There are more First Aid stations than picnic areas.

28. Bathrooms are located on the north and south end corners of the fair grounds.

29. From the Ferris Wheel, head southeast to find the nearest First Aid station.

30. The faire stays open later on Saturdays than the other days it is open.

Percentage of Renaissance Faire Attendees Wearing Costumes



— Costumed Attendees 0-12 ■ Costumed Attendees 13-18 ■ Costumed Attendees 19-35 ■ Costumed Attendees 36 and Over

Percentage of Renaissance Faire Attendees Wearing Costumes

31. What do the darkest bars on the graph represent?
- The year
 - Costumed attendees 13-18
 - Costumed attendees 19-35
 - Costumed attendees 36 and over
32. Which age group experienced the highest percentage growth from 2019 to 2023?
- 0-12
 - 13-18
 - 19-35
 - 36 and over
33. Between which two consecutive years did the percentage of costumed attendees aged 0-12 see the highest increase?
- 2019-2020
 - 2020-2021
 - 2021-2022
 - 2022-2023
34. What is the trend for costumed attendees aged 19-35 from 2019 to 2023?
- Steady decrease
 - Steady increase
 - Increase followed by a decrease
 - No significant change
35. How many age groups had their lowest percentage of costumed attendees in 2019?
- 0
 - 1
 - 2
 - 4
36. What does the second y-axis represent?
- Percentage
 - The year 2023
 - 36 and over age group
 - No second y-axis is present
37. Which age group had the most variation over the time represented in the graph?
- 0-12
 - 13-18
 - 19-35
 - 36 and over
38. Which age group had the highest number of costumed attendees in 2023?
- 13-18
 - 19-35
 - 36 and over
 - Not indicated
39. Which age group had the highest percentage of costumed attendees the most years?
- 0-12
 - 13-18
 - 19-35
 - 36 and over
40. In which year did the age group 19-35 surpass the 10% mark for the first time?
- 2019
 - 2020
 - 2021
 - 2022
- TRUE/FALSE**
41. The graph covers six years of information.
42. The general trend for all groups is an increase in costumed attendees every year.
43. The 19-35 age group had the lowest percentage of costumed attendees every year.
44. According to the graph, 73% of faire attendees wore costumes in 2023.
45. The percentage of costumed attendees never exceeded 25% in any age group.

This page is intentionally blank.

Asia (Various Maps)

46. Which of the following countries has working oil fields?

- a. Syria
- b. Turkmenistan
- c. Yemen
- d. All of the above

47. The Ural River forms what kind of boundary in western Kazakhstan?

- a. International
- b. Disputed
- c. Continental
- d. None of the above

48. Tundra can be found in which country?

- a. Indonesia
- b. Siberia
- c. Iran
- d. Russia

49. The island of Borneo is a territory of what country?

- a. Malaysia
- b. Indonesia
- c. Brunei
- d. All of the above

50. Tropical climate can be found in what country?

- a. Taiwan
- b. Turkey
- c. China
- d. Pakistan

51. What religion is predominant in western Asia?

- a. Christianity
- b. Islam
- c. Traditional or folk
- d. Buddhism

52. Which Indian city with a population of over three million is located on the Godavari River?

- a. Jaipur
- b. Pune
- c. Nasik
- d. None of the above

53. Which country is not part of the Indian subcontinent?

- a. Nepal
- b. Pakistan
- c. Myanmar
- d. Bangladesh

54. Which of the following has the highest birth rate?

- a. Laos
- b. China
- c. India
- d. World

55. What country has areas of elevation over 20,000 feet?

- a. Russia
- b. China
- c. Indonesia
- d. Turkey

TRUE/FALSE

56. The Himalayas is decreasing by about .2 inches per year.

57. China is about twice the size of the contiguous United States.

58. The main type of land use in Thailand is commercial farming.

59. The capital of Japan is located in the north part of the country.

60. Mongolia is the least densely populated country on the continent.

KING'S SHOPPE: INDIVIDUAL ITEM SALES 2023

- ◆— Coffee
- Ice Cream
- ▲— Turkey Legs
- *— Funnel Cakes
- *— Hot Chocolate



King's Shop: Individual Item Sales 2023

61. Which item sold the most in August?
- Coffee
 - Ice cream
 - Turkey legs
 - Funnel cakes
62. In what month did ice cream sell the most?
- September
 - October
 - November
 - December
63. How many items had their highest sales in December?
- 0
 - 1
 - 2
 - 3
64. Which item sold the most for all months combined?
- Coffee
 - Turkey legs
 - Funnel cakes
 - Hot chocolate
65. In which month in 2022 did turkey legs sell the least?
- August
 - September
 - October
 - Not indicated
66. Which item never fell below sales of 4,000 in a single month?
- Turkey legs
 - Funnel cakes
 - Hot chocolate
 - Ice cream

67. Which item had the biggest increase in sales between August and December?
- Ice cream
 - Turkey legs
 - Funnel cakes
 - Hot chocolate
68. In which month did funnel cakes see a drop in consumption compared to the previous month?
- September
 - October
 - November
 - December
69. What month had the lowest amount of sales for all items combined?
- August
 - September
 - October
 - November
70. What does the line with triangle markers represent?
- October
 - November
 - Ice cream
 - Turkey legs

TRUE/FALSE

71. Coffee sold more than twice as much as hot chocolate in August.
72. September was the month ice cream sold the most.
73. Turkey legs sales had the least amount of variation over the time covered in the graph.
74. Ice cream is the only item that sold more than 5,000 units every month.
75. The highest monthly consumption for turkey legs was lower than the lowest monthly consumption for ice cream.

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ MAPS/GRAPHS/CHARTS
SPRING DISTRICT TEST – GRADES 5 & 6**

Answer Key

1. A	26. F	51. B
2. B	27. F	52. D
3. D	28. F	53. C
4. A	29. T	54. A
5. D	30. F	55. B
6. D	31. D	56. F
7. C	32. D	57. F
8. B	33. C	58. T
9. C	34. B	59. F
10. A	35. C	60. T
11. D	36. D	61. B
12. D	37. D	62. B
13. C	38. D	63. B
14. B	39. B	64. A
15. C	40. C	65. D
16. C	41. F	66. D
17. C	42. T	67. D
18. C	43. F	68. C
19. A	44. F	69. A
20. D	45. T	70. D
21. C	46. D	71. T
22. C	47. C	72. T
23. A	48. D	73. T
24. C	49. D	74. F
25. A	50. C	75. T

CONTESTANT NUMBER:

FOR GRADER USE ONLY

Score Test Below:

_____ out of 250. Initials _____

_____ out of 250. Initials _____

Papers contending to place:

_____ out of 250. Initials _____



**University Interscholastic League
A+ Mathematics Contest • Answer Sheet**

Write your contestant number in the upper right corner, and circle your grade below.

Circle Grade Level:

6 7 8

1. A B C D E
2. A B C D E
3. A B C D E
4. A B C D E
5. A B C D E
6. A B C D E
7. A B C D E
8. A B C D E
9. A B C D E
10. A B C D E
11. A B C D E
12. A B C D E
13. A B C D E
14. A B C D E
15. A B C D E
16. A B C D E
17. A B C D E
18. A B C D E
19. A B C D E
20. A B C D E
21. A B C D E
22. A B C D E
23. A B C D E
24. A B C D E
25. A B C D E

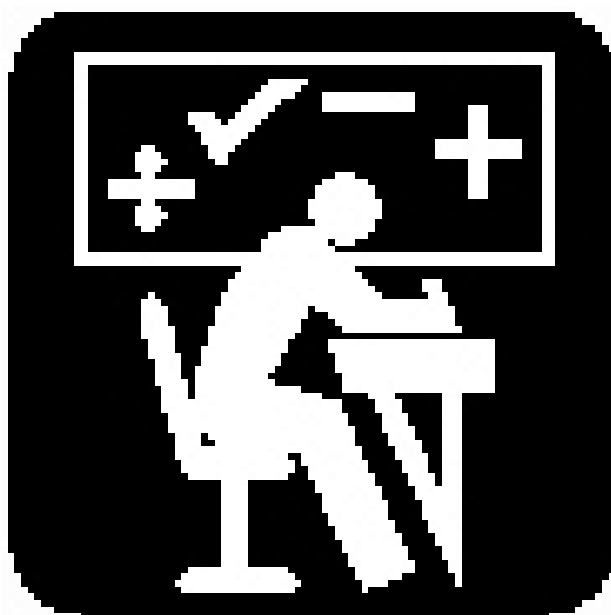
26. A B C D E
27. A B C D E
28. A B C D E
29. A B C D E
30. A B C D E
31. A B C D E
32. A B C D E
33. A B C D E
34. A B C D E
35. A B C D E
36. A B C D E
37. A B C D E
38. A B C D E
39. A B C D E
40. A B C D E
41. A B C D E
42. A B C D E
43. A B C D E
44. A B C D E
45. A B C D E
46. A B C D E
47. A B C D E
48. A B C D E
49. A B C D E
50. A B C D E

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



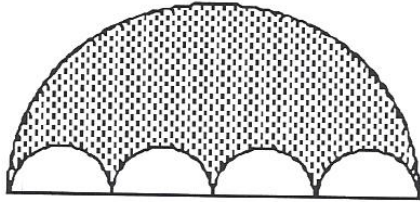
Mathematics

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

2024 – 2025 University Interscholastic League JH/MS Mathematics Contest A

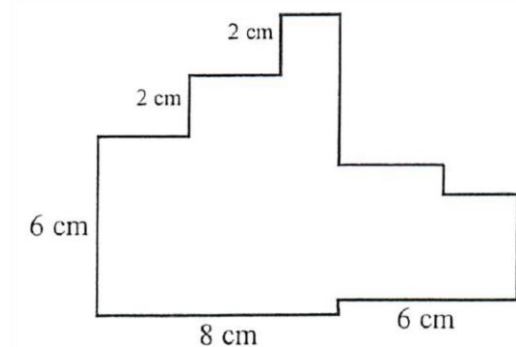
- (1) Evaluate: $8 + 12 \div 2^{-2}$.
 A) 11 B) 48 C) -5 D) 56 E) $5\frac{1}{4}$
- (2) Which number is a rational number?
 A) $\sqrt{144}$ B) $\sqrt{2}$ C) $\pi \div 2$ D) 2π E) $\frac{\pi}{4}$
- (3) Paige uses the inequality shown, where q is the number of question she can miss on her quiz and still earn an 80 on a quiz.

$$80 \leq 100 - 5q$$

 Which statement below represents the number of questions Paige can miss on her quiz?
 A) $q = 4$ B) $q \geq 4$ C) $q \leq 4$ D) $q \geq 16$ E) $q \leq 16$
- (4) The dance committee is making punch for the eighth-grade dance. How many 1-cup servings will be provided from a punch bowl containing 6.5 quarts of punch?
 A) 8 B) 12 C) 13 D) 24 E) 26
- (5) If five-sixths of a number is 2500, what is two-thirds of that number?
 A) 1,500 B) 2,000 C) 2,200 D) 2,400 E) 3,000
- (6) The variables a and b represent real numbers, and b is not 0. Which statement describes the relation between a and b if $a\left(\frac{1}{b}\right) = 1$.
 A) $a = b$ B) $a = -b$ C) $a = 1 - b$ D) $a > b$ E) $a < b$
- (7) The ratio of overtime pay to regular pay is 3:2. If Mackenzie earns \$72 for a regular 8-hour day, what does she earn for 3 hours of overtime?
 A) \$9.00 B) \$12.00 C) \$13.50 D) \$36.00 E) \$40.50
- (8) If the radius of each of the smaller semicircles in the figure to the right is 1-cm, what is the area of the shaded region of the larger semicircle?

 A) 4π sq. cm. D) 16π sq. cm.
 B) 6π sq. cm. E) 64π sq. cm.
 C) 12π sq. cm.
- Problem # 8
- (9) A person drives 100 miles in 2 hours and then drives 200 miles in 3 hours. What is the average speed for the entire trip in miles per hour (mph)?
 A) 52 mph B) 58 mph C) $58\frac{1}{3}$ mph D) 60 mph E) $62\frac{2}{3}$ mph
- (10) Find the number of terms in the sequence: 7, 11, 15, 19, . . . , 203.
 A) 5 B) 29 C) 49 D) 50 E) 203
- (11) If $x - 4$ is 2 greater than y , then $x + 5$ is how much greater than y ?
 A) 1 B) 4 C) 5 D) 7 E) None of These

- (12) If 2 people can paint a house in 3 days, how long will it take 4 people to paint the same house?
 A) 1 day B) $1\frac{1}{4}$ days C) $1\frac{1}{2}$ days D) 2 days E) 6 days
- (13) Amanda averages 12 MPH riding her bicycle to school. Averaging 36 MPH by car takes her one-half hour less time. How far does she travel to school?
 A) 9 miles B) 12 miles C) 15 miles D) 20 miles E) 36 miles
- (14) Joe and Janice ordered a large pizza that was cut into equal-sized pieces. Joe ate one half of the pizza and Janice ate one fourth of it. If there were five pieces left, how many pieces were there to begin with?
 A) 12 B) 16 C) 20 D) 24 E) 28
- (15) If a rectangle has sides of $2x$ and $3x$ and an area of 24, what is the value of x ?
 A) 2 B) 3 C) 4 D) 6 E) 12
- (16) If you skip-count backwards by 5's starting from 83 and not going below 0, then how many of those whole numbers will be multiples of 3?
 A) 4 B) 5 C) 6 D) 7 E) None of These
- (17) Margaret has a farm with pigs and chickens. She counts 30 feet and 9 heads at her farm. How many pigs does she have?
 A) 2 B) 3 C) 4 D) 5 E) 6
- (18) The average of Sara's first three test scores is 95 points. The average of her next two tests was 90 points. What is her overall average?
 A) 91 B) 92 C) 93 D) 94 E) None of These
- (19) A school has 40 teachers. Each teacher teaches 4 classes. Each class has 30 students and 1 teacher. If each student takes 5 classes, how many students does the school have?
 A) 960 B) 1,000 C) 1,200 D) 1,500 E) 4,800
- (20) The Outlet is having a clearance sale. \$80 jeans were 50% off and now are an additional 20% off. How much do the jeans cost now?
 A) \$24 B) \$28 C) \$32 D) \$48 E) \$56
- (21) What is the least common multiple (LCM) for $9xy^4$ and $12x^2y^2$?
 A) $3xy$ B) $18x^2y^2$ C) $36x^3y^6$ D) $108x^2y^8$ E) None of These
- (22) In the figure to the right and below, all angles are right angles and side lengths are as labeled. What is the perimeter of the figure?

Problem
22



- A) 24 cm
 B) 32 cm
 C) 40 cm
 D) 48 cm
 E) None of These

- (23) When each side of a square increased in length by 50%, its area increased by 180 square inches. How many square inches are in the original square?
 A) 80 B) 90 C) 100 D) 144 E) 270

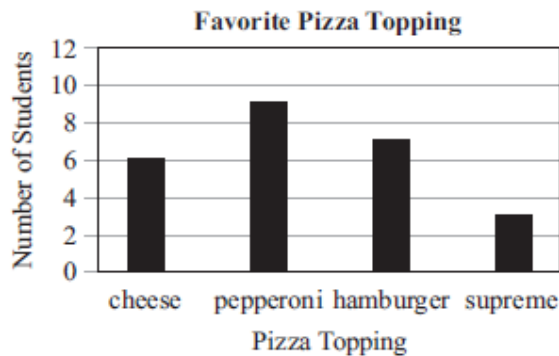
- (24) Find the mean, median, and mode, respectively, for the following set of data listed below.

{11, 6, 13, 12, 8, 12, 12, 10, 6}

- A) 10, 12, 11 B) 11, 10, 12 C) 12, 11, 10 D) 11, 12, 10 E) 10, 11, 12

- (25) Each student in a class of 25 students was surveyed about his or her favorite pizza topping. Using the graph below, determine what percentage of the students selected cheese or hamburger topping as their favorite.

- A) 25%
 B) 40%
 C) 48%
 D) 52%
 E) 60%



Problem # 25

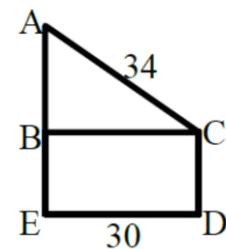
- (26) What time is it 456 minutes after 2:22 PM?
 A) 6:48 PM B) 7:36 PM C) 8:48 PM D) 9:36 PM E) 9:58 PM

- (27) A point is located on the line $6x - 3y = 12$. If the x-coordinate of this point is 4, what is the y-coordinate?
 A) 2 B) 3 C) 4 D) 6 E) 12

- (28) In the rectangle BCDE, $BC = 30$ cm. A is on the extension of EB, and $AC = 34$ cm. The area of triangle ABC is 30 cm^2 less than half of the area of BCDE. What is the perimeter of the quadrilateral ACDE?

- A) 58 cm D) 112 cm
 B) 80 cm E) 116 cm
 C) 85 cm

Problem
#28



- (29) If $n\%$ of 6 kilometers is 150 meters, then what is 6% of n kilometers?
 A) 0.15 km B) 0.3 km C) 3 km D) 9 km E) 15 km

- (30) Josh is making campaign posters for the student council election. He has 5 colors of markers and 4 colors of poster paper. How many different color combinations of paper and marker are possible?
 A) 1 B) 9 C) 16 D) 20 E) 25

- (31) What number is doubled when $\frac{3}{4}$ of it is subtracted from 99?

- A) 32 B) 34 C) 36 D) 40 E) 44

- (32) What is the sum of all of the whole number factors of 12?
 A) 16 B) 18 C) 21 D) 24 E) None of These
- (33) How long will it take a 2-mile-long train going 20 mph to go completely through a 2-mile tunnel?
 A) 3 min B) 6 min C) 9 min D) 12 min E) 20 min

At the Abraham Lincoln Middle School Harvest Dance, there is a large bucket filled with 90 ping-pong balls. These are for drawing for door prizes. Each ball is numbered with a single-digit natural number. There is an equal number of each digit. (Please remember that zero is not a natural number when counting!) **Please use this information to answer questions 34 – 37.**

- (34) What is the probability that you pick a ball having an odd digit?
 A) $\frac{45}{90}$ B) $\frac{40}{90}$ C) $\frac{49}{90}$ D) $\frac{4}{9}$ E) $\frac{5}{9}$
- (35) What is the probability that you pick a ball having an even digit?
 A) $\frac{50}{90}$ B) $\frac{45}{90}$ C) $\frac{49}{90}$ D) $\frac{4}{9}$ E) $\frac{4}{5}$
- (36) Which expression represents the probability of picking two balls (no replacement) having odd digits?
 A) $\frac{45}{90} \times \frac{44}{89}$ B) $\frac{5}{9} \times \frac{1}{2}$ C) $\frac{50}{90} \times \frac{44}{89}$ D) $\frac{5}{9} \times \frac{4}{9}$ E) $1 - \frac{50}{90}$
- (37) What is the probability of picking up a number that represents a multiple of ten?
 A) zero B) $\frac{1}{11}$ C) $\frac{1}{9}$ D) $\frac{1}{5}$ E) $\frac{1}{10}$
- (38) If $\frac{x}{4} + \frac{x}{2} = 6$, then what does x equal?
 A) 2 B) 4 C) 6 D) 8 E) 12
- (39) You have 2 circles. The smaller circle has a radius of 1 and the larger circle has a radius of 6. What is the ratio of the circumference of the larger circle to the smaller circle?
 A) 1 : 6 B) 6 : 1 C) 12 : 1 D) 5 : 1 E) 36 : 1
- (40) Wesley is measuring the height of an oak tree in his yard. Wesley is 4 feet tall and his shadow is 7 feet long. The oak tree's shadow, at the same time of day, is 28 feet long. How tall is the oak tree?
 A) 16 feet B) 32 feet C) 36 feet D) 48 feet E) 49 feet
- (41) A sports arena has 15,000 seats. About two-thirds of the seats are sold for each event. If tickets cost \$25 per seat, approximately how much money would the arena collect for a season with 10 sporting events?
 A) \$1,250,000 B) \$1,750,000 C) \$2,500,000 D) \$3,750,000 E) \$7,500,000
- (42) If six students can assemble 24 bicycles in 8 hours, how many bicycles can 3 students make in 4 hours?
 A) 3 B) 4 C) 5 D) 6 E) 8

- (43) Larry skated 1 hr 15 min each day for 5 days and 1 hr 30 min each day for 3 days. How long would he have to skate the ninth day to average 85 minutes of skating each day for the entire time?
A) 1 hr. B) 1 hr. 10 min. C) 1 hr. 20 min. D) 1 hr. 40 min. E) 2 hrs.
- (44) Three positive integers are in the ratio 1:3:4 and have a sum of 72. What is the smallest of the three integers?
A) 9 B) 8 C) 6 D) 4 E) 1
- (45) Five of the six sides of a cube are marked with 1, 2, 3, 4, and 5. The sixth side is blank. Five sides of another cube are marked 1, 2, 3, 5, and 6. The other side is blank. What is the probability of rolling a sum of 7 on a throw of this pair of cubes?
A) $\frac{1}{6}$ B) $\frac{1}{9}$ C) zero D) $\frac{1}{7}$ E) $\frac{1}{4}$
- (46) How many odd numbers are there between 20 and 100?
A) 32 B) 36 C) 40 D) 48 E) 50
- (47) What is largest integer that will divide both 126 and 336 evenly?
A) 24 B) 28 C) 32 D) 36 E) 42
- (48) The three brothers Tom, John, and Steve were born exactly 4 years apart. The eldest is exactly 5 times as old as the youngest. How old is the youngest brother?
A) 2 years B) 3 years C) 4 years D) 5 years E) 10 years
- (49) The average of 5 consecutive integers is 27. One of the integers is removed and the sum of the remaining integers is 106. What is the value of the integer that was removed?
A) 26 B) 27 C) 28 D) 29 E) 30
- (50) Li wants to conduct an opinion survey at her middle school using a sample set that would best represent the entire school. Which of the following groups of students should be the best sample set for Li to survey?
A) All the students that ride the school bus daily
B) Half of the students enrolled in 8th grade English
C) Every 15th student who enters school one morning
D) Every 10th student buying a ticket to the football game
E) Half of the students who belong to school-sponsored clubs

2024 – 2025 University Interscholastic League JH/MS Mathematics Contest A – Key

- (1) D
- (2) A
- (3) C
- (4) E
- (5) B
- (6) A
- (7) E
- (8) B
- (9) D
- (10) D
- (11) E (11)
- (12) C
- (13) A
- (14) C
- (15) A
- (16) C
- (17) E
- (18) C
- (19) A
- (20) C
- (21) E (x^2y^4)
- (22) D
- (23) D
- (24) E
- (25) D

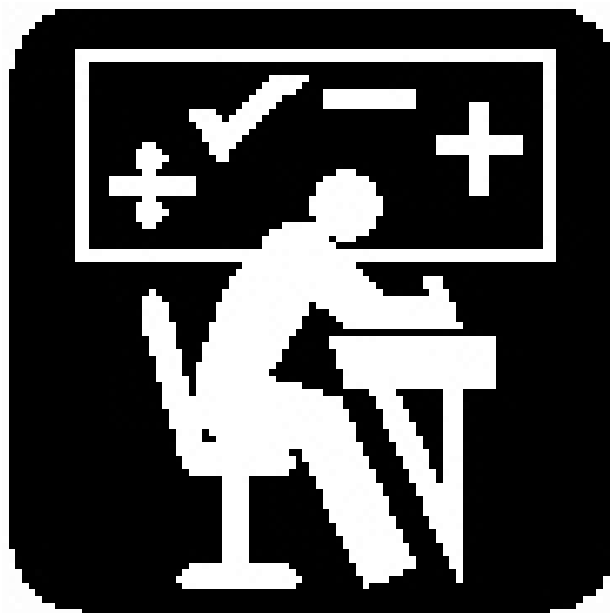
- (26) E
- (27) C
- (28) E
- (29) A
- (30) D
- (31) C
- (32) E (28)
- (33) D
- (34) E
- (35) D
- (36) C
- (37) A
- (38) D
- (39) B
- (40) A
- (41) C
- (42) D
- (43) E
- (44) A
- (45) B
- (46) C
- (47) E
- (48) A
- (49) D
- (50) C

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



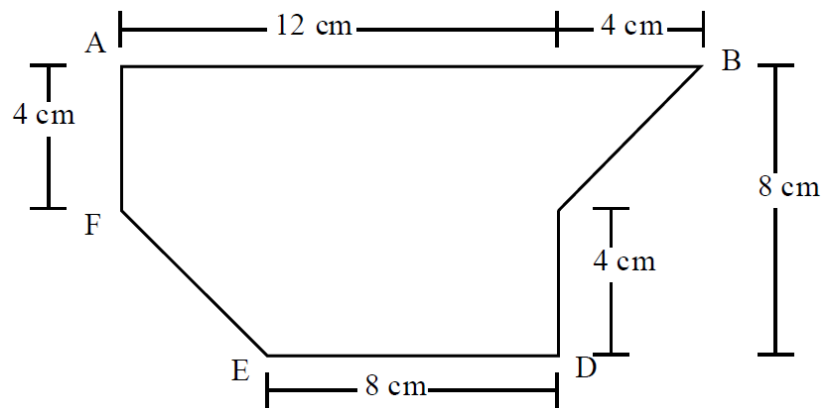
Mathematics

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

2024 – 2025 University Interscholastic League JH/MS Mathematics Contest B

- (1) Evaluate: $18 + 4^0 \times 2 - 8 \div 2^{-2}$
 A) -12 B) 6 C) 48 D) -14 E) 7
- (2) Which of the following numbers is a triangular number?
 A) 2 B) 4 C) 8 D) 10 E) 12
- (3) $(-0.1) + (-0.2) + (-0.3) + \dots + (-1.0) = ?$
 A) -4.5 B) -5.5 C) 3.9 D) -4.9 E) 5.5
- (4) If three-eighths of a pound of hamburger costs \$0.57, then how much does two pounds of hamburger cost?
 A) 38¢ B) \$1.14 C) \$1.52 D) \$3.04 E) \$4.56
- (5) If the edge of a cube is doubled, by what percent does the surface area increase?
 A) 50% B) 100% C) 200% D) 300% E) 400%
- (6) $4\frac{1}{3} \times 4\frac{2}{3} = ?$
 A) $20\frac{2}{9}$ B) $8\frac{2}{3}$ C) $16\frac{2}{9}$ D) $8\frac{2}{9}$ E) None of These
- (7) In a jar, the ratio of the number of oatmeal cookies to the number of chocolate chip cookies is 5:2. If there are 20 oatmeal cookies, how many chocolate chip cookies are in the jar?
 A) 8 B) 12 C) 18 D) 28 E) 50

- (8) In the figure to the right, angle $\angle B = 45^\circ$; angles $\angle A$ and $\angle D$ are right angles; the $m\angle E = m\angle F = 135^\circ$. What is the area of the figure?



Problem # 8

- A) 50 sq. cm.
 B) 90 sq. cm.
 C) 96 sq. cm.
 D) 100 sq. cm.
 E) 128 sq. cm.
- (9) Noah is making $1\frac{1}{2}$ batches of muffins. If one batch calls for $1\frac{3}{4}$ cups flour, how much flour will he need?
 A) $\frac{7}{8}$ cup B) $\frac{13}{8}$ C) $2\frac{5}{8}$ cups D) $3\frac{1}{2}$ cups E) 5 cups
- (10) When expanded, what is the number of zeros in 1000^{10} ?
 A) 4 B) 10 C) 13 D) 30 E) 1,000
- (11) If $a + b = 12$, $b + c = 16$, and $c = 7$, what is the value of a ?
 A) 1 B) 3 C) 5 D) 7 E) None of These

- (12) Juan began peeling a pile of 44 potatoes at the rate of 3 potatoes per minute. Four minutes later Diego joined him and peeled at the rate of 5 potatoes per minute. When they finished, how many potatoes had Diego peeled?

A) 20

B) 24

C) 32

D) 33

E) 40
- (13) A wheel with radius 1 meter is rolled in a straight line through one complete revolution on a flat horizontal surface. How many meters did the center of the wheel travel horizontally from its starting location?

A) 1 meter

B) 2 meters

C) π meters

D) 2π meters

E) 4π meters
- (14) Find the sum of all solutions for x if $x^2 + 3x - 12 = 6$.

A) -12

B) -3

C) 3

D) 6

E) 18
- (15) What is the smallest possible average of four distinct positive even integers?

A) 2

B) 3

C) 4

D) 6

E) None of These
- (16) Two dice are thrown. What is the probability that the product of the two numbers is a multiple of 5?

A) $\frac{1}{36}$

B) $\frac{1}{18}$

C) $\frac{2}{9}$

D) $\frac{1}{3}$

E) $\frac{5}{36}$
- (17) I’m thinking of two whole numbers. Their product is 24 and their sum is 11. What is the larger number?

A) 3

B) 4

C) 6

D) 8

E) 12
- (18) If snow falls at a rate of 1 mm every 6 minutes, then how many hours will it take for 1 m of snow to fall?

A) 10 hours

B) 26 hours

C) 33 hours

D) 60 hours

E) None of These
- (19) Liz may pay \$1.50 for a single bus ticket or \$5.75 for a package of 5 tickets. If Liz requires 40 tickets, how much does she save by buying all of the tickets in packages of 5 rather than buying 40 single tickets?

A) \$4.25

B) \$8.25

C) \$14.00

D) \$34.00

E) \$54.25
- (20) Genny made soup which contains 75 total ounces of beans. If the soup has two kinds of beans, black and red, while there are 4 times as many ounces of black beans as red beans, how many ounces of red beans are in the soup?

A) 5 ounces

B) 6 ounces

C) 12 ounces

D) 15 ounces

E) 19 ounces
- (21) The number 6 has exactly four positive divisors: 1, 2, 3, and 6. How many positive divisors does 20 have?

A) 2

B) 3

C) 4

D) 5

E) 6
- (22) A class of 32 students plans to buy the following items listed in the table below. If the class of 32 students splits the cost evenly, and assuming there is no tax, which equivalent can be used to find **T** (the amount each student should pay)?

A) $\mathbf{T} = 5(5.99) + 6(0.99) + 1.79$

B) $\mathbf{T} = (5 \times 5.99 + 6 \times 0.99 + 1.79) \div 32$

C) $\mathbf{T} = (5 \times 0.99 + 6 \times 5.99 + 1.79) \div 32$

D) $\mathbf{T} = (5 \times 5.99 + 6 \times 0.99 + 1.79) \times 32$

E) $\mathbf{T} = 5(5.99) + 6(0.99) - 1.79 \div 32$
- | Quantity | Item | Unit Price |
|----------|-----------------|------------|
| 5 | Pepperoni Pizza | \$5.99 |
| 6 | 2-Liter Drinks | \$0.99 |
| 1 | Pack of Cups | \$1.79 |
- Problem # 22

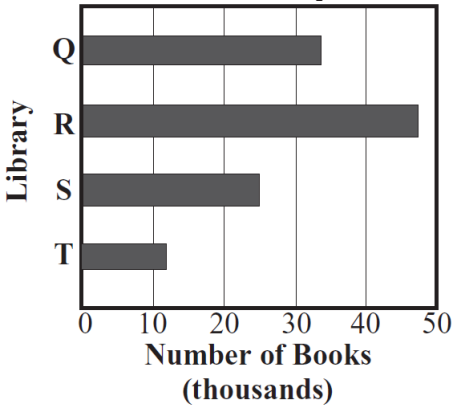
- (23) Mr. Gonzales was 125 miles from home at 8:30 A.M. He arrived home at 11:00 A.M. What was his average speed for the time-period from 8:30 A.M. to 11:00 A.M.?
- A) 32 miles/hour B) 38 miles/hour C) 42 miles/hour D) 50 miles/hour E) 55 miles/hour

- (24) What number should go in the empty box to make the equation true?

$$\frac{44 \times 7}{35 - \square} = 28$$

- A) 8.8 B) 10 C) 12 D) 18 E) None of These
- (25) Delta County has 4 libraries. The number of books in each library is shown on the bar graph to the right. According to the data shown on the graph, Library R has how many times the number of books as Library T?

Books in Delta County Libraries

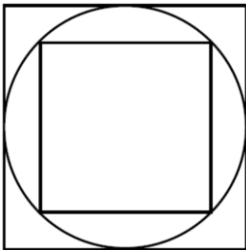


Problem # 25

- (26) How many whole numbers less than 50 are multiples of 7 but not of 5?
- A) 2 B) 4 C) 6 D) 7 E) 8
- (27) The points (-3, -1) and (-3, 5) are adjacent vertices of a rectangle. Two of the sides of the rectangle have a length of 8 inches. What is the length of a diagonal of the rectangle?
- A) 9 inches B) 10 inches C) 12 inches D) 14 inches E) 15 inches

- (28) In the diagram to the right, a circle is inscribed in a large square and a smaller square is inscribed in the circle. If the area of the large square is 36, the area of the smaller square is

Problem #28



- A) 9
B) 12
C) 15
D) 18
E) 24

- (29) If the pattern shown below continues, what will be the 1002nd letter?

MATHISFUNMATHISFUNMATHISFUNMATHISFUNMATHISFUN...

- A) **M** B) **A** C) **T** D) **H** E) **I**
- (30) What is the perimeter of a regular dodecagon with side length 5?
- A) 60 B) 55 C) 50 D) 45 E) 40

- (31) What is the larger root of the quadratic equation: $x^2 - 7x + 12 = 0$?
 A) 1 B) 2 C) 3 D) 4 E) 6

- (32) Ramona has the following scores on her science tests.

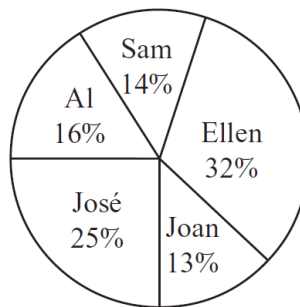
88, 91, 89, 85, 92

If she wants to increase her current test mean by at least 1 point, what is the minimum score she must make on her next test?

- A) 88 B) 89 C) 90 D) 92 E) 95
- (33) How long will it take a 3-mile-long train going 48 mph to go completely through a 5-mile tunnel?
 A) 3 min B) 6 min C) 10 min D) 12 min E) 15 min

The percent of votes received by each of the 5 candidates who ran for president of the Student Council is shown in the circle graph below. Please use this graph to answer questions 34 – 37. Note that students that voted were only allowed to vote for one candidate.

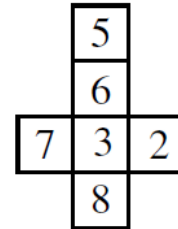
Votes Received



Problem #33

- (34) Which 2 candidates combined received more than half of the total votes?
 A) Al and Sam B) Ellen and José C) Sam and Ellen D) Ellen and Joan E) Al and José
- (35) If 300 total student votes were counted, how many students voted for Sam or Al?
 A) 90 B) 45 C) 48 D) 42 E) 30
- (36) If 300 total student votes were counted, how many students did not vote for either Ellen or Joan?
 A) 125 B) 135 C) 145 D) 155 E) 165
- (37) If 300 total student votes were counted, how many students voted for the candidate with the shortest name?
 A) 16 B) 18 C) $\frac{4}{75}$ D) 48 E) 84
- (38) What is the probability a randomly chosen card from a 52-card deck is either a red card or a spade?
 A) $\frac{3}{4}$ B) $\frac{1}{26}$ C) $\frac{1}{13}$ D) $\frac{1}{2}$ E) $\frac{1}{3}$
- (39) How many cubes of side length 5 fit inside of a rectangular prism of side lengths 30, 35, and 50?
 A) 125 B) 150 C) 160 D) 210 E) 420

- (40) Amanda is painting the wooden fence around her backyard. She can paint 8 boards in 30 minutes. How long will it take her to paint 100 boards?
 A) 6 hours
 B) 6 hours and 15 minutes
 C) 6 hours and 25 minutes
 D) 6 hours and 30 minutes
 E) 6 hours and 45 minutes
- (41) Twenty percent of the seats in a theater are in the balcony. The rest are on the main floor. Twenty-five percent of the balcony seats are filled. Fifty percent of the main floor seats are filled. There are 132 empty seats in the theater. How many seats does the theater have?
 A) 198 B) 227 C) 240 D) 264 E) 440
- (42) If a square has diagonal length of $\sqrt{42}$, what is its area?
 A) 21 B) 22 C) 28 D) 48 E) 84
- (43) The figure shown to the right is folded to form a cube. Three faces meet at each corner. If the numbers on the three faces at a corner are multiplied, what is the largest possible product?
 A) 144
 B) 168
 C) 240
 D) 280
 E) 336



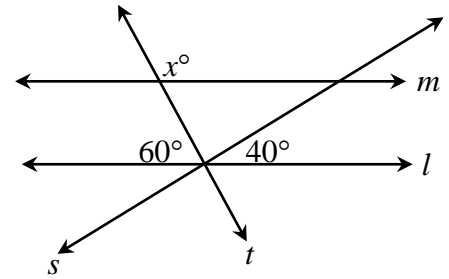
Problem # 43

- (44) Last week, Edna earned \$84 for working 14 hours. This week, she earned \$120 at the same hourly rate. Exactly how many hours did Edna work this week?
 A) 6 hrs. B) 8 hrs. C) 14 hrs. D) 20 hrs. E) 36 hrs.
- (45) Each side of a cube is x cm wide. Which formula can be used to find a , the combined area of the top and bottom faces of the cube?
 A) $a = \frac{1}{6}x^2$ B) $a = 2x^2$ C) $a = x^2$ D) $a = \frac{1}{3}x^2$ E) $a = \frac{1}{4}x^2$
- (46) The weight limit for an elevator is 1500 kilograms. The average weight of a person in the elevator is 80 kilograms. If the combined weight of the people is 100 kilograms over the limit, how many people are in the elevator?
 A) 12 B) 14 C) 16 D) 18 E) None of These
- (47) What is the largest prime factor of 357?
 A) 3 B) 7 C) 11 D) 13 E) None of These
- (48) Suppose Alicia, Frank, and Martin are in a band which makes \$1,800,000 selling CDs. If Martin gets twice as much money as Alicia, but only one third as much as Frank, how much money do Alicia and Martin make together?
 A) \$100,000 B) \$200,000 C) \$400,000 D) \$500,000 E) \$600,000

- (49) The mean of a set of five numbers is known to be 9.4. If four of the numbers in the set are 7, 11, 15, and 19, what is the missing number?
- A) -5 B) 0 C) 9.4 D) 12 E) 21

- (50) In the figure below and to the right, lines l and m are parallel to one another and cut by transversals s and t . What is the value of angle x ?

- A) 60°
B) 70°
C) 80°
D) 120°
E) 140°



Problem #50

2024 – 2025 University Interscholastic League JH/MS Mathematics Contest B – Key

- (1) A
- (2) D
- (3) B
- (4) D
- (5) D
- (6) A
- (7) A
- (8) C
- (9) C
- (10) D
- (11) B
- (12) A
- (13) D
- (14) B
- (15) E (5)
- (16) E
- (17) D
- (18) E (100)
- (19) C
- (20) D
- (21) E
- (22) B
- (23) D
- (24) E (24)
- (25) B

- (26) C
- (27) B
- (28) D
- (29) C
- (30) A
- (31) D
- (32) E
- (33) C
- (34) B
- (35) A
- (36) E
- (37) D
- (38) A
- (39) E
- (40) B
- (41) C
- (42) A
- (43) D
- (44) D
- (45) B
- (46) E (20)
- (47) E (17)
- (48) E
- (49) A
- (50) D

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



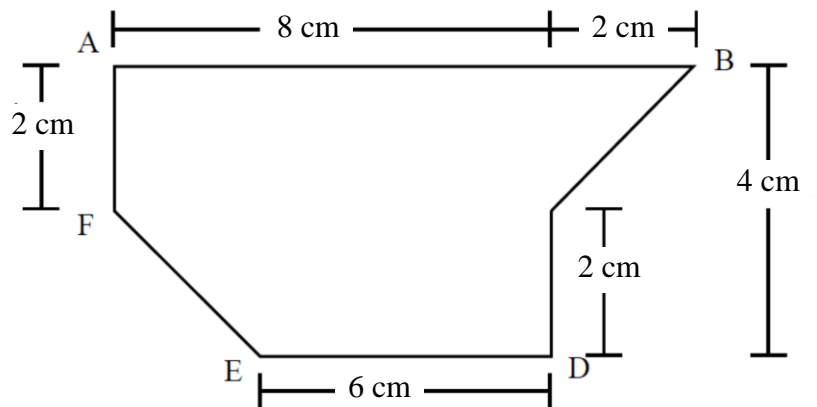
Mathematics

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

2024 – 2025 University Interscholastic League JH/MS Mathematics Contest C

- (1) Evaluate: $24 + 4^2 \times 2^{-2} - 8 \div 2^0$
 A) -28 B) 20 C) 28 D) -14 E) 36
- (2) Which of the following numbers is a triangular number?
 A) 6 B) 10 C) 15 D) 21 E) All of These
- (3) $(-0.2) + (-0.4) + (-0.6) + \dots + (-1.0) = ?$
 A) 2 B) 3 C) -3 D) -3.2 E) 4
- (4) If three-eighths of a pound of hamburger costs \$1.25, then how much does three pounds of hamburger cost?
 A) \$3.75 B) \$10.00 C) \$11.25 D) \$9.38 E) 94¢
- (5) If the edge of a square is doubled, by what percent does the area increase?
 A) 50% B) 100% C) 200% D) 300% E) 400%
- (6) $4\frac{3}{4} \times 4\frac{1}{4} = ?$
 A) $20\frac{3}{4}$ B) $16\frac{1}{4}$ C) $20\frac{3}{16}$ D) $16\frac{3}{4}$ E) None of These
- (7) In a jar, the ratio of the number of oatmeal cookies to the number of chocolate chip cookies is 5:2. If there are 25 oatmeal cookies, how many chocolate chip cookies are in the jar?
 A) 8 B) 10 C) 12 D) 15 E) 25

- (8) In the figure to the right, angle $\angle B = 45^\circ$; angles $\angle A$ and $\angle D$ are right angles; the $m\angle E = m\angle F = 135^\circ$. What is the area of the figure?



Problem # 8

- A) 28 sq. cm.
 B) 32 sq. cm.
 C) 36 sq. cm.
 D) 40 sq. cm.
 E) 60 sq. cm.
- (9) Noah is making $1\frac{1}{2}$ batches of muffins. If one batch calls for $2\frac{3}{4}$ cups flour, how much flour will he need?
 A) $4\frac{1}{8}$ cup B) $3\frac{3}{8}$ C) $2\frac{5}{8}$ cups D) $3\frac{1}{4}$ cups E) $4\frac{3}{8}$ cups
- (10) When expanded, what is the number of zeros in 100^{10} ?
 A) 2 B) 10 C) 20 D) 30 E) 1,000
- (11) If $a + b = 12$, $b + c = 16$, and $c = 5$, what is the value of a ?
 A) 1 B) 2 C) 11 D) 12 E) None of These

- (12) Juan began peeling a pile of 36 potatoes at the rate of 3 potatoes per minute. Four minutes later Diego joined him and peeled at the rate of 5 potatoes per minute. When they finished, how many potatoes had Diego peeled?

A) 12

B) 15

C) 20

D) 24

E) 30
- (13) A wheel with radius 2 meters is rolled in a straight line through one complete revolution on a flat horizontal surface. How many meters did the center of the wheel travel horizontally from its starting location?

A) 1 meter

B) 2 meters

C) π meters

D) 2π meters

E) 4π meters
- (14) Find the sum of all solutions for x if $x^2 + 13x - 23 = 7$.

A) 23

B) 13

C) 7

D) -13

E) -23
- (15) What is the smallest possible average of three distinct positive even integers?

A) 2

B) 3

C) 4

D) 6

E) None of These
- (16) Two dice are thrown. What is the probability that the product of the two numbers is a multiple of 4?

A) $\frac{11}{36}$

B) $\frac{1}{9}$

C) $\frac{2}{9}$

D) $\frac{5}{12}$

E) $\frac{1}{4}$
- (17) I’m thinking of two whole numbers. Their product is 24 and their sum is 11. What is the smaller number?

A) 3

B) 4

C) 6

D) 8

E) 12
- (18) If snow falls at a rate of 1 mm every 3 minutes, then how many hours will it take for 1 m of snow to fall?

A) 10 hours

B) 26 hours

C) 50 hours

D) 60 hours

E) None of These
- (19) Liz may pay \$1.50 for a single bus ticket or \$6.00 for a package of 5 tickets. If Liz requires 40 tickets, how much does she save by buying all of the tickets in packages of 5 rather than buying 40 single tickets?

A) \$4.50

B) \$12.00

C) \$14.00

D) \$28.00

E) \$48.00
- (20) Genny made soup which contains 60 total ounces of beans. If the soup has two kinds of beans, black and red, while there are 4 times as many ounces of black beans as red beans, how many ounces of red beans are in the soup?

A) 5 ounces

B) 6 ounces

C) 12 ounces

D) 15 ounces

E) 48 ounces
- (21) The number 6 has exactly four positive divisors: 1, 2, 3, and 6. How many positive divisors does 18 have?

A) 2

B) 3

C) 4

D) 5

E) 6
- (22) A class of 28 students plans to buy the following items listed in the table below. If the class of 28 students splits the cost evenly, and assuming there is no tax, which equivalent can be used to find **T** (the amount each student should pay)?

A) $\mathbf{T} = 5(5.99) + 6(0.99) + 1.79$

B) $\mathbf{T} = (5 \times 0.99 + 6 \times 5.99 + 1.79) \div 28$

C) $\mathbf{T} = (5 \times 5.99 + 6 \times 0.99 + 1.79) \div 28$

D) $\mathbf{T} = (5 \times 5.99 + 6 \times 0.99 + 1.79) \times 28$

E) $\mathbf{T} = 5(5.99) + 6(0.99) - 1.79 \div 28$
- | Quantity | Item | Unit Price |
|----------|-----------------|------------|
| 5 | Pepperoni Pizza | \$5.99 |
| 6 | 2-Liter Drinks | \$0.99 |
| 1 | Pack of Cups | \$1.79 |
- Problem # 22

- (23) Mr. Gonzales was 150 miles from home at 8:30 A.M. He arrived home at 11:00 A.M. What was his average speed for the time-period from 8:30 A.M. to 11:00 A.M.?
- A) 25 miles/hour B) 30 miles/hour C) 36 miles/hour D) 50 miles/hour E) 60 miles/hour

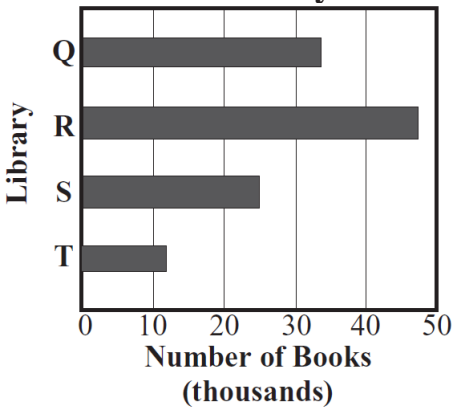
- (24) What number should go in the empty box to make the equation true?

$$\frac{44 \times 7}{35 - \square} = 77$$

- A) 31 B) 28 C) 14 D) 6 E) None of These

- (25) Delta County has 4 libraries. The number of books in each library is shown on the bar graph to the right. According to the data shown on the graph, Library Q has about how many more books than Library T?

Books in Delta County Libraries



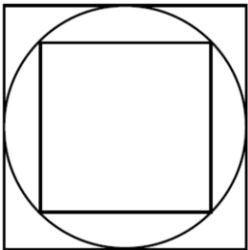
Problem # 25

- (26) How many whole numbers less than 50 are multiples of 4 but not of 5?
- A) 6 B) 8 C) 9 D) 10 E) 11
- (27) The points (3, -1) and (3, 11) are adjacent vertices of a rectangle. Two of the sides of the rectangle have a length of 5 inches. What is the length of a diagonal of the rectangle?
- A) 10 inches B) 11 inches C) 12 inches D) 13 inches E) 15 inches

- (28) In the diagram to the right, a circle is inscribed in a large square and a smaller square is inscribed in the circle. If the area of the large square is 100, the area of the smaller square is

- A) 10
B) 20
C) 25
D) 50
E) 120

Problem #28



- (29) If the pattern shown below continues, what will be the 100th letter?

MATHISFUNMATHISFUNMATHISFUNMATHISFUNMATHISFUN...

- A) **M** B) **A** C) **T** D) **H** E) **I**

- (30) What is the perimeter of a regular dodecagon with side length 4?

- A) 80 B) 60 C) 48 D) 40 E) 24

- (31) What is the smaller root of the quadratic equation: $x^2 - 7x + 12 = 0$?
 A) 1 B) 2 C) 3 D) 4 E) 6

- (32) Ramona has the following scores on her science tests.

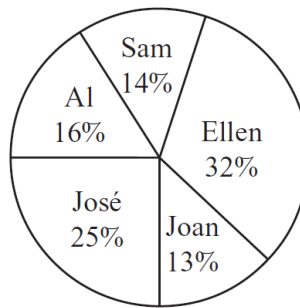
78, 81, 79, 75, 82

If she wants to increase her current test mean by at least 1 point, what is the minimum score she must make on her next test?

- A) 84 B) 85 C) 86 D) 87 E) 88
- (33) How long will it take a 3-mile-long train going 20 mph to go completely through a 2-mile tunnel?
 A) 3 min B) 6 min C) 9 min D) 12 min E) 15 min

The percent of votes received by each of the 5 candidates who ran for president of the Student Council is shown in the circle graph below. Please use this graph to answer questions 34 – 37. Note that students that voted were only allowed to vote for one candidate.

Votes Received



Problem #33

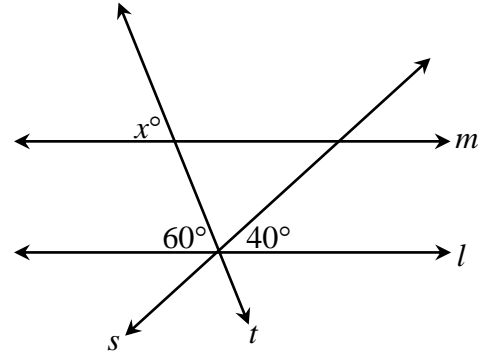
- (34) Which 2 candidates combined received the total votes closest to the leader's total?
 A) Al and Sam B) Ellen and José C) Sam and Ellen D) Ellen and Joan E) Al and José
- (35) If 200 total student votes were counted, how many students voted for Sam or Al?
 A) 600 B) 60 C) 48 D) 32 E) 28
- (36) If 200 total student votes were counted, how many students did not vote for either Ellen or José?
 A) 114 B) 104 C) 92 D) 86 E) 72
- (37) If 200 total student votes were counted, how many students voted for the candidate with the shortest name?
 A) 32 B) 34 C) $\frac{3}{25}$ D) 42 E) 68
- (38) What is the probability a randomly chosen card from a 52-card deck is either a queen or a spade?
 A) $\frac{1}{4}$ B) $\frac{1}{26}$ C) $\frac{4}{13}$ D) $\frac{1}{13}$ E) $\frac{22}{117}$
- (39) How many cubes of side length 5 fit inside of a rectangular prism of side lengths 25, 30, and 50?
 A) 150 B) 200 C) 250 D) 300 E) 750

- (40) Amanda is painting the wooden fence around her backyard. She can paint 8 boards in 30 minutes. How long will it take her to paint 120 boards?
 A) 7 hours
 B) 7 hours and 15 minutes
 C) 7 hours and 25 minutes
 D) 7 hours and 30 minutes
 E) 7 hours and 45 minutes
- (41) Twenty percent of the seats in a theater are in the balcony. The rest are on the main floor. Twenty-five percent of the balcony seats are filled. Fifty percent of the main floor seats are filled. There are 121 empty seats in the theater. How many seats does the theater have?
 A) 198 B) 220 C) 240 D) 264 E) 440
- (42) If a square has diagonal length of $\sqrt{140}$, what is its area?
 A) 28 B) 35 C) 70 D) 120 E) 140
- (43) The figure shown to the right is folded to form a cube. Three faces meet at each corner. If the numbers on the three faces at a corner are multiplied, what is the largest possible product?
 A) 144
 B) 168
 C) 240
 D) 280
 E) 336
-
- Problem # 43
- (44) Last week, Edna earned \$168 for working 14 hours. This week, she earned \$120 at the same hourly rate. Exactly how many hours did Edna work this week?
 A) 8 hrs. B) 10 hrs. C) 12 hrs. D) 14 hrs. E) 20 hrs.
- (45) Each side of a cube is x cm wide. Which formula can be used to find a , the combined area of three faces of the cube?
 A) $a = \frac{1}{6}x^2$ B) $a = 2x^2$ C) $a = 3x^2$ D) $a = \frac{1}{3}x^2$ E) $a = \frac{1}{4}x^2$
- (46) The weight limit for an elevator is 1180 kilograms. The average weight of a person in the elevator is 80 kilograms. If the combined weight of the people is 100 kilograms over the limit, how many people are in the elevator?
 A) 12 B) 14 C) 16 D) 18 E) None of These
- (47) What is the largest prime factor of 429?
 A) 3 B) 7 C) 11 D) 13 E) None of These
- (48) Suppose Alicia, Frank, and Martin are in a band which makes \$900,000 selling CDs. If Martin gets twice as much money as Alicia, but only one third as much as Frank, how much money do Alicia and Martin make together?
 A) \$100,000 B) \$200,000 C) \$300,000 D) \$400,000 E) \$500,000

- (49) The mean of a set of five numbers is known to be 9.6. If four of the numbers in the set are 7, 11, 15, and 19, what is the missing number?
- A) -5 B) -3 C) 0 D) 9.6 E) None of these

- (50) In the figure below and to the right, lines l and m are parallel to one another and cut by transversals s and t . What is the value of angle x ?

- A) 60°
B) 70°
C) 80°
D) 120°
E) 140°



Problem #50

2024 – 2025 University Interscholastic League JH/MS Mathematics Contest C – Key

- (1) B
- (2) E
- (3) C
- (4) B
- (5) D
- (6) C
- (7) B
- (8) B
- (9) A
- (10) C
- (11) A
- (12) B
- (13) E
- (14) D
- (15) C
- (16) D
- (17) A
- (18) C
- (19) B
- (20) C
- (21) E
- (22) C
- (23) E
- (24) A
- (25) C

- (26) D
- (27) D
- (28) D
- (29) A
- (30) C
- (31) C
- (32) B
- (33) E
- (34) A
- (35) B
- (36) D
- (37) A
- (38) C
- (39) D
- (40) D
- (41) B
- (42) C
- (43) E
- (44) B
- (45) C
- (46) C
- (47) D
- (48) C
- (49) E (-4)
- (50) A

University Interscholastic League
2024 – 2025 Elementary Number Sense Test A

Contestant's Number _____

Final		
2 nd		
1 st		
	Score	Initials

**Read Directions Carefully
Before Beginning Test**

**Do Not Unfold This Sheet
Until Told to Begin**

Directions: Do not turn this page until the person conducting this test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. **ALL PROBLEMS ARE TO BE SOLVED MENTALLY.** Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a (*) require approximate integral answers; any answer to a starred problem that is within five percent of the exact answer will be scored correct; all other problems require exact answers.

The person conducting this contest should explain these directions to the contestants.
Stop – Wait for Signal!

- | | |
|---|--|
| <p>(1) $22 + 41 =$ _____</p> <p>(2) $37 + 48 =$ _____</p> <p>(3) $108 - 42 =$ _____</p> <p>(4) $312 \div 3 =$ _____</p> <p>(5) $26 \times 5 =$ _____</p> <p>(6) $425 - 332 =$ _____</p> <p>(7) $19 + 7 + 13 =$ _____</p> <p>(8) $52 \times 11 =$ _____</p> <p>(9) $16 \times 50 =$ _____</p> <p>*(10) $2025 + 224 =$ _____</p> <p>(11) $16 \times 25 =$ _____</p> <p>(12) Which digit is in the hundredths place in 34917.20568? _____</p> <p>(13) $22 \times 18 =$ _____</p> <p>(14) 83670.2874 rounded to the tenths place is _____</p> <p>(15) What is the remainder for $60318 \div 9$? _____</p> <p>(16) The number of even whole numbers between 13 and 25 is _____</p> <p>(17) $3 \times 10^{-2} + 2 \times 10^0 + 4 \times 10^{-1} =$ _____ (decimal)</p> <p>(18) $17 \times 3 + 17 \times 7 =$ _____</p> <p>(19) DLX = _____ (Arabic Numeral)</p> | <p>*(20) $225 \times 399 =$ _____</p> <p>(21) $16 - 8 \div 2 =$ _____</p> <p>(22) $9 + 12 + 15 + 18 =$ _____</p> <p>(23) $\frac{1}{12}$ hour = _____ minutes</p> <p>(24) $123 \times 20 =$ _____</p> <p>(25) $\frac{5}{14} - \frac{3}{14} =$ _____</p> <p>(26) $99 \times 98 =$ _____</p> <p>(27) 38% = _____ common fraction</p> <p>(28) If 15 ♥ costs 25¢, then 45 ♥ cost _____ ¢</p> <p>(29) $21 \div \frac{3}{10} =$ _____</p> <p>*(30) $499 \times 719 + 59 =$ _____</p> <p>(31) \$28 = _____ quarters</p> <p>(32) The largest prime number between 40 and 60 is _____</p> <p>(33) 64 ounces = _____ quarts</p> <p>(34) $3434 \div 34 =$ _____</p> <p>(35) $83\frac{1}{3}\%$ = _____ common fraction</p> <p>(36) The LCM of 24 and 16 is _____</p> <p>(37) $33 \times 12 =$ _____</p> |
|---|--|

- (38) If 12 apples cost \$2.40, then 8 apples cost \$_____
- (39) 6 is to 20 as 3 is to _____
- *(40) $213 \times 667 =$ _____
- (41) $\frac{1}{8} + \frac{3}{8} =$ _____ (common fraction)
- (42) $16^2 - 6 =$ _____
- (43) If $f(x) = 3x - 5$, then $f(4) =$ _____
- (44) The radius of a circle with a circumference of 100π is

- (45) $2^4 \times 3^0 =$ _____
- (46) $2\frac{1}{4} \times 6\frac{1}{4} =$ _____ (mixed number)
- (47) What is the area of a square with perimeter 36? _____
- (48) $44\frac{4}{9}\% \times 18 =$ _____
- (49) If there are 12 grapes to an ounce, then 1 pound equals how many grapes? _____
- *(50) $249\frac{1}{90} \times 164 =$ _____
- (51) What is the number, k , in the sequence:
1, 3, 5, k , , 9, 11, . . . ? _____
- (52) $9\frac{4}{5} - 6\frac{9}{10} =$ _____ (mixed number)
- (53) $\sqrt{576} =$ _____
- (54) A square with area 9 is located inside a square with perimeter 36. What is the area between the squares?

- (55) 32 (base 3) = _____ (base 10)
- (56) The number of elements in $\{2, 4, 6\} \cup \{1, 2, 3, 4\}$ is

- (57) What is the perimeter of a regular hexagon with side $4\frac{1}{2}$? _____
- (58) $75 \times 32 =$ _____
- (59) $2\frac{1}{2} + 2\frac{1}{2} \times 4\frac{1}{2} =$ _____
- *(60) 160 inches = _____ centimeters
- (61) 1001 (base 2) = _____ (base 4)
- (62) $125 \times (-4) =$ _____
- (63) What is the probability a getting a sum of 9 when rolling a pair of dice? _____
- (64) 3 pints = _____ ounces
- (65) $57^2 =$ _____
- (66) $10^5 \div 6$ has remainder of _____
- (67) The area of a rhombus with diagonals $2\frac{1}{2}$ and 20 is

- (68) If $-3x + 15 < 54$, then $x >$ _____
- (69) $(-2.25) \times (-40) =$ _____
- *(70) $25^3 =$ _____
- (71) The multiplicative inverse of $6\frac{3}{7}$ is _____
- (72) $6^2 - 26^2 =$ _____
- (73) 125% of 440 = _____
- (74) What is the area of a trapezoid with bases $4\frac{1}{4}$, $6\frac{1}{4}$ and altitude to the bases of 20? _____
- (75) $24^2 + 6^2 =$ _____
- (76) $(1 + 3 + 5 + \dots + 11)^2 =$ _____
- (77) What is the total surface area of a rectangular box with edges 8, 6 and 5? _____
- (78) The area of a right triangle with legs $4\frac{1}{4}$ and 16 is

- (79) $375 \times 80 =$ _____
- *(80) 15 square miles = _____ acres

2024 – 2025 University Interscholastic League Elementary Number Sense Test A – Key

(1) 63	*(20) 85287 – 94263	(38) 1.60	(59) $13\frac{3}{4}$; 13.75; $\frac{55}{4}$
(2) 85	(21) 12	(39) 10	*(60) 387 – 426
(3) 66	(22) 54	*(40) 134968 – 149174	(61) 21
(4) 104	(23) 5	(41) $\frac{1}{2}$	(62) -500
(5) 130	(24) 2460	(42) 250	(63) $\frac{1}{9}$
(6) 93	(25) $\frac{1}{7}$	(43) 7	(64) 48
(7) 39	(26) 9702	(44) 50	(65) 3249
(8) 572	(27) $\frac{19}{50}$	(45) 16	(66) 4
(9) 800	(28) 75	(46) $14\frac{1}{16}$	(67) 25
*(10) 2137 – 2361	(29) 70	(47) 81	(68) -13
(11) 400	*(30) 340898 – 376782	(48) 8	(69) 90
(12) 0	(31) 112	(49) 192	*(70) 14844 – 16406
(13) 396	(32) 59	*(50) 38796 – 42879	(71) $\frac{7}{45}$
(14) $83670.3; 83670\frac{3}{10};$ $\frac{836703}{10}$	(33) 2	(51) 7	(72) -640
(15) 0	(34) 101	(52) $2\frac{9}{10}$	(73) 550
(16) 6	(35) $\frac{5}{6}$	(53) 24	(74) 105
(17) 2.43	(36) 48	(54) 72	(75) 612
(18) 170	(37) 396	(55) 5	(76) 1296
(19) 560		(56) 5	(77) 236
		(57) 27	(78) 34
		(58) 2400	(79) 30000
			*(80) 9120 – 10080

Note: *(Number) x – y means an integer between x and y inclusive.

If an answer is of the type like $\frac{2}{3}$ it cannot be written as .666... or $\overline{.6}$.

University Interscholastic League
2024 – 2025 Elementary Number Sense Test B

Contestant's Number _____

Final		
2 nd		
1 st		
	Score	Initials

**Read Directions Carefully
Before Beginning Test**

**Do Not Unfold This Sheet
Until Told to Begin**

Directions: Do not turn this page until the person conducting this test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. **ALL PROBLEMS ARE TO BE SOLVED MENTALLY.** Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a (*) require approximate integral answers; any answer to a starred problem that is within five percent of the exact answer will be scored correct; all other problems require exact answers.

The person conducting this contest should explain these directions to the contestants.
Stop – Wait for Signal!

- | | |
|---|---|
| <p>(1) $24 + 45 =$ _____</p> <p>(2) $78 + 23 =$ _____</p> <p>(3) $224 - 56 =$ _____</p> <p>(4) $918 \div 3 =$ _____</p> <p>(5) $5 \times 48 =$ _____</p> <p>(6) $402 - 127 =$ _____</p> <p>(7) $36 + 16 + 14 =$ _____</p> <p>(8) $64 \times 11 =$ _____</p> <p>(9) $50 \times 23 =$ _____</p> <p>*(10) $1 + 897 + 1203 =$ _____</p> <p>(11) $16 \times 25 =$ _____</p> <p>(12) 38670.4782 rounded to the hundreds place is
_____</p> <p>(13) Which digit is in the thousands place in
34917.20568? _____</p> <p>(14) $31 \times 29 =$ _____</p> <p>(15) What is the remainder for $46188 \div 9$? _____</p> <p>(16) The number of odd whole numbers between 7 and
19 is _____</p> <p>(17) $5 \times 10^{-1} + 6 \times 10^1 + 2 \times 10^{-3} =$ _____ (decimal)</p> <p>(18) $57 \times 15 - 57 \times 5 =$ _____</p> <p>(19) XCIV = _____ (Arabic Numeral)</p> | <p>*(20) $667 \times 39 =$ _____</p> <p>(21) $18 + 24 \div 2 \times 3 =$ _____</p> <p>(22) $34 + 30 + 26 + 22 =$ _____</p> <p>(23) $\frac{5}{12}$ hour = _____ minutes</p> <p>(24) $143 \times 7 =$ _____</p> <p>(25) $\frac{19}{24} - \frac{3}{24} =$ _____</p> <p>(26) $102 \times 101 =$ _____</p> <p>(27) 76% = _____ common fraction</p> <p>(28) If 15 ♥ costs 27¢, then 10 ♥ cost _____ ¢</p> <p>(29) $28 \div \frac{7}{10} =$ _____</p> <p>*(30) $126 \times 721 + 54 =$ _____</p> <p>(31) \$39.75 = _____ quarters</p> <p>(32) The smallest prime number between 60 and 50 is
_____</p> <p>(33) 64 ounces = _____ pints</p> <p>(34) $44 \times 18 =$ _____</p> <p>(35) $87\frac{1}{2}\%$ = _____ common fraction</p> <p>(36) The LCM of 24 and 15 is _____</p> <p>(37) $36 \times 12 =$ _____</p> |
|---|---|

- (38) If 12 apples cost \$3.60, then 8 apples cost \$_____
- (39) 12 is to 20 as 4 is to _____
- *(40) $161 \times 625 =$ _____
- (41) $\frac{5}{16} + \frac{7}{16} =$ _____(common fraction)
- (42) $14^2 - 4 =$ _____
- (43) If $f(x) = 2x + 7$, then $f(12) =$ _____
- (44) The diameter of a circle with an area of 144π is

- (45) $3^3 \times 3^0 =$ _____
- (46) $2\frac{1}{8} \times 2\frac{7}{8} =$ _____(mixed number)
- (47) What is the perimeter of a square with area 64?_____
- (48) $77\frac{7}{9}\% \times 36 =$ _____
- (49) If there are 128 grapes to a pound, then 1 ounce equals how many grapes? _____
- *(50) $334\frac{1}{70} \times 359 =$ _____
- (51) What is the number, k , in the sequence:
0, 3, 8, k , 24, 35, . . . ? _____
- (52) $4\frac{3}{4} + 5\frac{7}{10} =$ _____(mixed number)
- (53) $\sqrt[3]{64} =$ _____
- (54) A square with area 16 is located inside a square with perimeter 24. What is the area between the squares?

- (55) 24 (base 6) = _____(base 10)
- (56) The number of elements in $\{1, 2, 4, 6\} \cap \{1, 2, 3, 4\}$ is _____
- (57) What is the perimeter of a regular octagon with side $4\frac{1}{2}$? _____
- (58) $75 \times 18 =$ _____
- (59) $12\frac{7}{9} - 3\frac{1}{3} \times 3\frac{1}{3} =$ _____
- *(60) 200 inches = _____centimeters
- (61) 31 (base 4) = _____ (base 2)
- (62) $(-225) \times (-4) =$ _____
- (63) What is the probability a getting a sum of 3 when rolling a pair of dice? _____
- (64) 4 quarts = _____ pints
- (65) $48^2 =$ _____
- (66) $12^5 \div 8$ has remainder of _____
- (67) The area of a rhombus with diagonals 10 and $12\frac{1}{2}$ is

- (68) If $-3x - 15 < -12$, then $x >$ _____
- (69) $(-40) \div (-0.25) =$ _____
- *(70) $19^3 =$ _____
- (71) The multiplicative inverse of $-3\frac{3}{8}$ is _____
- (72) $18^2 - 32^2 =$ _____
- (73) If 150% of 220 = _____
- (74) What is the area of a trapezoid with bases $5\frac{1}{8}$, $9\frac{1}{8}$ and altitude to the bases of 8? _____
- (75) $15^2 + 30^2 =$ _____
- (76) $(1 + 2 + 3 + \dots + 10)^2 =$ _____
- (77) What is the total surface area of a rectangular box with edges 4, 7 and 6? _____
- (78) The area of a right triangle with legs $8\frac{2}{3}$ and 12 is

- (79) $625 \times 80 =$ _____
- *(80) 25 square miles = _____acres

2024 – 2025 University Interscholastic League Elementary Number Sense Test B – Key

(1) 69	*(20) 24713 – 27313	(38) 2.40	(59) $1\frac{2}{3}; \frac{5}{3}$
(2) 101	(21) 54	(39) $6\frac{2}{3}; \frac{20}{3}$	*(60) 483 – 533
(3) 168	(22) 112	*(40) 95594– 105656	(61) 1101
(4) 306	(23) 25	(41) $\frac{3}{4}$	(62) 900
(5) 240	(24) 1001	(42) 192	(63) $\frac{1}{18}$
(6) 275	(25) $\frac{2}{3}$	(43) 31	(64) 8
(7) 66	(26) 10302	(44) 24	(65) 2304
(8) 704	(27) $\frac{19}{25}$	(45) 27	(66) 0
(9) 1150	(28) 18	(46) $6\frac{7}{64}$	(67) $62\frac{1}{2}; \frac{125}{2}; 62.5$
*(10) 1996 – 2206	(29) 40	(47) 32	(68) -1
(11) 400	*(30) 86355 – 95445	(48) 28	(69) 160
(12) 38700	(31) 159	(49) 8	*(70) 6517 – 7201
(13) 4	(32) 53	*(50) 113916 – 125906	(71) $-\frac{8}{27}$
(14) 899	(33) 4	(51) 15	(72) -700
(15) 0	(34) 792	(52) $10\frac{9}{20}$	(73) 330
(16) 5	(35) $\frac{7}{8}$	(53) 4	(74) 57
(17) 60.502	(36) 120	(54) 20	(75) 1125
(18) 570	(37) 432	(55) 16	(76) 3025
(19) 94		(56) 3	(77) 188
		(57) 36	(78) 52
		(58) 1350	(79) 50000
			*(80) 15200 – 16800

Note: *(Number) x – y means an integer between x and y inclusive.

If an answer is of the type like $\frac{2}{3}$ it cannot be written as .666... or $\overline{.6}$.

University Interscholastic League
2024 – 2025 Elementary Number Sense Test C

Contestant's Number _____

Final		
2 nd		
1 st		
	Score	Initials

**Read Directions Carefully
Before Beginning Test**

**Do Not Unfold This Sheet
Until Told to Begin**

Directions: Do not turn this page until the person conducting this test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. **ALL PROBLEMS ARE TO BE SOLVED MENTALLY.** Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a (*) require approximate integral answers; any answer to a starred problem that is within five percent of the exact answer will be scored correct; all other problems require exact answers.

The person conducting this contest should explain these directions to the contestants.
Stop – Wait for Signal!

- | | |
|--|---|
| <p>(1) $71 + 26 =$ _____</p> <p>(2) $38 + 83 =$ _____</p> <p>(3) $701 - 46 =$ _____</p> <p>(4) $204 \div 4 =$ _____</p> <p>(5) $6 \times 23 =$ _____</p> <p>(6) $472 - 363 =$ _____</p> <p>(7) $32 + 14 + 18 =$ _____</p> <p>(8) $49 \times 11 =$ _____</p> <p>(9) $50 \times 76 =$ _____</p> <p>*(10) $5 + 792 + 1993 =$ _____</p> <p>(11) $36 \times 25 =$ _____</p> <p>(12) 38670.4782 rounded to the thousands place is _____</p> <p>(13) Which digit is in the thousands place in 743914.20685? _____</p> <p>(14) $51 \times 49 =$ _____</p> <p>(15) What is the remainder for $64388 \div 9$? _____</p> <p>(16) The number of odd whole numbers between 17 and 39 is _____</p> <p>(17) $2 \times 10^{-3} + 3 \times 10^2 + 8 \times 10^{-2} =$ _____ (decimal)</p> <p>(18) $24 \times 35 - 24 \times 5 =$ _____</p> <p>(19) XLIV = _____ (Arabic Numeral)</p> | <p>*(20) $42 \times 667 =$ _____</p> <p>(21) $18 + 12 \div 3 \times 2 =$ _____</p> <p>(22) $26 + 22 + 18 + 14 =$ _____</p> <p>(23) $\frac{7}{12}$ hour = _____ minutes</p> <p>(24) $286 \times 7 =$ _____</p> <p>(25) $\frac{13}{24} - \frac{3}{24} =$ _____</p> <p>(26) $103 \times 102 =$ _____</p> <p>(27) 84% = _____ common fraction</p> <p>(28) If 12 ♥ costs 27¢, then 16 ♥ cost _____ ¢</p> <p>(29) $24 \div \frac{3}{10} =$ _____</p> <p>*(30) $639 \times 126 + 86 =$ _____</p> <p>(31) \$27.75 = _____ quarters</p> <p>(32) The smallest prime number between 50 and 20 is _____</p> <p>(33) 48 ounces = _____ pints</p> <p>(34) $44 \times 21 =$ _____</p> <p>(35) $62\frac{1}{2}\%$ = _____ common fraction</p> <p>(36) The LCM of 36 and 24 is _____</p> <p>(37) $45 \times 15 =$ _____</p> |
|--|---|

- (38) If 12 apples cost \$2.40, then 8 apples cost \$_____
- (39) 12 is to 20 as 5 is to _____
- *(40) $318 \times 625 =$ _____
- (41) $\frac{11}{24} + \frac{7}{24} =$ _____ (common fraction)
- (42) $15^2 - 5 =$ _____
- (43) If $f(x) = 2x - 7$, then $f(12) =$ _____
- (44) The diameter of a circle with an area of 100π is

- (45) $5^3 \div 5^0 =$ _____
- (46) $8\frac{1}{8} \times 8\frac{7}{8} =$ _____ (mixed number)
- (47) What is the perimeter of a square with area 49? _____
- (48) $55\frac{5}{9} \% \times 36 =$ _____
- (49) If there are 112 grapes to a pound, then 1 ounce equals how many grapes? _____
- *(50) $299\frac{1}{70} \times 402 =$ _____
- (51) What is the number, k , in the sequence:
-1, 2, 7, k , 23, 34, ...? _____
- (52) $5\frac{7}{8} + 7\frac{3}{4} =$ _____ (mixed number)
- (53) $\sqrt[3]{27} =$ _____
- (54) A square with area 49 is located inside a square with perimeter 52. What is the area between the squares?

- (55) 34 (base 6) = _____ (base 10)
- (56) The number of elements in $\{1, 2, 3, 6\} \cap \{1, 2, 3, 4\}$ is _____
- (57) What is the perimeter of a regular octagon with side $6\frac{1}{4}$? _____
- (58) $75 \times 28 =$ _____
- (59) $22\frac{7}{9} - 4\frac{1}{3} \times 4\frac{2}{3} =$ _____
- *(60) 250 inches = _____ centimeters
- (61) 32 (base 4) = _____ (base 2)
- (62) $(-125) \times (-4) =$ _____
- (63) What is the probability a getting a sum of 5 when rolling a pair of dice? _____
- (64) 6 quarts = _____ pints
- (65) $36^2 =$ _____
- (66) $11^5 \div 9$ has remainder of _____
- (67) The area of a rhombus with diagonals 20 and $15\frac{1}{2}$ is

- (68) If $-3x + 15 < 12$, then $x >$ _____
- (69) $(-24) \div (-0.25) =$ _____
- *(70) $21^3 =$ _____
- (71) The multiplicative inverse of $-3\frac{5}{8}$ is _____
- (72) $22^2 - 28^2 =$ _____
- (73) If 150% of 210 = _____
- (74) What is the area of a trapezoid with bases $4\frac{3}{4}$, $6\frac{3}{4}$ and altitude to the bases of 8? _____
- (75) $21^2 + 42^2 =$ _____
- (76) $(1 + 2 + 3 + \dots + 9)^2 =$ _____
- (77) What is the total surface area of a rectangular box with edges 3, 5 and 4? _____
- (78) The area of a right triangle with legs $6\frac{2}{3}$ and 6 is

- (79) $625 \times 48 =$ _____
- *(80) 32 square miles = _____ acres

2024 – 2025 University Interscholastic League Elementary Number Sense Test C – Key

(1) 97	*(20) 26614 – 29414	(38) 1.60	(59) $2\frac{5}{9}; \frac{23}{9}$
(2) 121	(21) 26	(39) $8\frac{1}{3}; \frac{25}{3}$	*(60) 604 – 666
(3) 655	(22) 80	*(40) 188813 – 208687	(61) 1110
(4) 51	(23) 35	(41) $\frac{3}{4}$	(62) 500
(5) 138	(24) 2002	(42) 220	(63) $\frac{1}{9}$
(6) 109	(25) $\frac{5}{12}$	(43) 17	(64) 12
(7) 64	(26) 10506	(44) 20	(65) 1296
(8) 539	(27) $\frac{21}{25}$	(45) 125	(66) 5
(9) 3800	(28) 36	(46) $72\frac{7}{64}$	(67) 155
*(10) 2651 – 2929	(29) 80	(47) 28	(68) 1
(11) 900	*(30) 76570 – 84630	(48) 20	(69) 96
(12) 39000	(31) 111	(49) 7	*(70) 8798 – 9724
(13) 3	(32) 23	*(50) 114194 – 126213	(71) $-\frac{8}{29}$
(14) 2499	(33) 3	(51) 14	(72) -300
(15) 2	(34) 924	(52) $13\frac{5}{8}$	(73) 315
(16) 10	(35) $\frac{5}{8}$	(53) 3	(74) 46
(17) 300.082	(36) 72	(54) 120	(75) 2205
(18) 720	(37) 675	(55) 22	(76) 2025
(19) 44		(56) 3	(77) 94
		(57) 50	(78) 20
		(58) 2100	(79) 30000
			*(80) 19456 – 21504

Note: *(Number) x – y means an integer between x and y inclusive.

If an answer is of the type like $\frac{2}{3}$ it cannot be written as .666... or $\overline{.6}$.

Contestant Number _____

Contestant Name _____
(to be filled in after judging)

UIL A+ Ready Writing Evaluation Sheet
Elementary, Middle School, and Junior High

INSTRUCTIONS

Judges should read the prompts that are given to the contestants. They should also read "Instructions for the Judges" for Ready Writing before evaluating contestants' papers. The compositions are to be evaluated as to relative excellence in interest (50%), organization (35%) and correctness of style (15%). While judges are to consider all three elements in selecting the most effective compositions, they should weigh interest more than organization and organization more than correctness of style.

TITLE OF COMPOSITION _____

CONSTRUCTIVE COMMENTS FOR THE CONTESTANT INCLUDING STRENGTHS:

AREAS NEEDING IMPROVEMENT:

Judge's signature _____



2024-25 A+ Ready Writing

INVITATIONAL

INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

THIRD AND FOURTH GRADES

Topic: *Positive Traits*

Think about three traits that you love about yourself. Write an essay explaining how these traits positively impact your life.

Topic: *Creative Story*

Write a story using these words being as creative as you would like: piano, bicycle, and castle.



2024-25 A+ Ready Writing

INVITATIONAL

INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

FIFTH AND SIXTH GRADES

Topic: *United States President* Imagine that you were the president of the United States. Write an essay describing one thing you would like to change as president and why you want to make that change.

Topic: *Winning Dreamer* Nelson Mandela once said, "A winner is a dreamer who never gives up." Write about what you think this quote means and apply it to your life in some way.



2024-25 A+ Ready Writing

FALL/WINTER DISTRICT

INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

THIRD AND FOURTH GRADES

Topic: *What I Learned*

Think about something you learned in the last year that has impacted your life. Write an essay explaining what you learned and how it has impacted you.

Topic: *Lost Puppy*

Write a story about a puppy who wanders off and gets lost. You may be as creative as you would like.



2024-25 A+ Ready Writing

FALL/WINTER DISTRICT

INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

FIFTH AND SIXTH GRADES

Topic: *Personal Airplane*

Pretend that you had your own airplane and could travel anywhere you wanted. Write a story about where you would go being as creative as you would like.

Topic: *Favorite Hobby*

Think about your favorite hobbies. Write an essay explaining what your favorite hobby is and how it impacts your life.



2024-25 A+ Ready Writing

SPRING DISTRICT

INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

THIRD AND FOURTH GRADES

Topic: *Pet Letter*

Write a persuasive letter to your parents explaining why you should get a new pet. Make sure not to use your real name in the letter.

Topic: *Principal of My School*

Imagine you are the principal of your school. Write an essay explaining how you would do things differently and what things you would do the same.



2024-25 A+ Ready Writing

SPRING DISTRICT

INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

FIFTH AND SIXTH GRADES

Topic: *Favorite Nature Place* Think about what your favorite place in nature looks like. Describe this place in detail and explain why this is your favorite nature place.

Topic: *Presence of Wonder* The author E.B. White once said, "Always be on the lookout for the presence of wonder." Write about what you think this quote means and apply it to your life in some way.

CONTESTANT NUMBER:**FOR GRADER USE ONLY**

Score Test Below:

____ Initials ____

____ Initials ____

Papers contending to place:

____ Initials ____

**University Interscholastic League
A+ Science Contest • Answer Sheet***Write your contestant number in the upper right corner and circle your grade below.***Circle Grade Level: 6 7 8**

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. A B C D

16. A B C D

17. A B C D

18. A B C D

19. A B C D

20. A B C D

21. A B C D

22. A B C D

23. A B C D

24. A B C D

25. A B C D

26. A B C D

27. A B C D

28. A B C D

29. A B C D

30. A B C D

31. A B C D

32. A B C D

33. A B C D

34. A B C D

35. A B C D

36. A B C D

37. A B C D

38. A B C D

39. A B C D

40. A B C D

41. A B C D

42. A B C D

43. A B C D

44. A B C D

45. A B C D

46. A B C D

47. A B C D

48. A B C D

49. A B C D

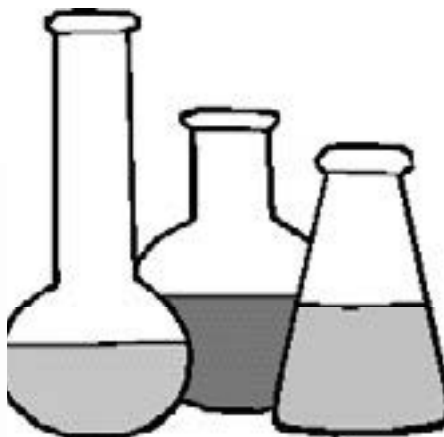
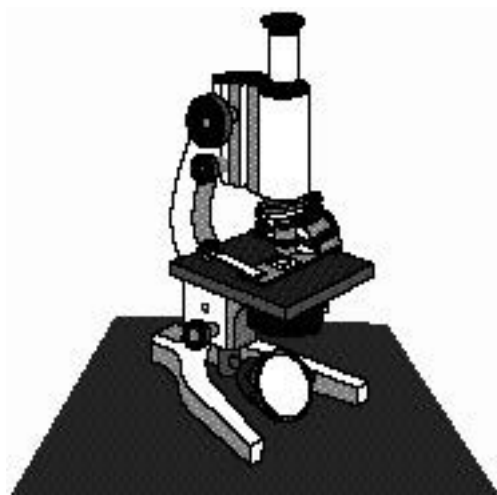
50. A B C D

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Science

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-2025 A+ SCIENCE
INVITATIONAL TEST**

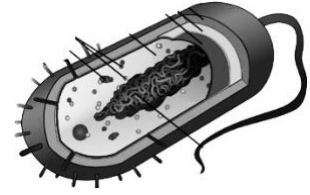
1. Which of the following is made of cells?
 - a. Rocks
 - b. Water
 - c. Sea anemone
 - d. Sun
2. Based on the table, which items indicate a chemical change occurred?

I.	Cutting foil into strips
II.	Melting an ice cube
III.	Mixing blue and clear liquids and it turning red
IV.	Evaporation of a puddle of rain water
V.	Two liquids forming a precipitate

- a. III and V
 - b. I, II, and IV
 - c. II and III
 - d. I and V
3. Aristotle was able to conclude from looking at the shadow the earth casts on the moon during an eclipse that
 - a. Earth is spherical
 - b. Earth rotates
 - c. Earth is old
 - d. Earth rotates around the sun
4. Which would have the most significant effect on the daily tides of the earth?
 - a. Changing the rate of the rotation of the moon
 - b. Altering the distance between the earth and the moon
 - c. Changing the rate of the rotation of the earth
 - d. Increasing the distance between the sun and the moon
5. Which is NOT an example of kinetic energy?
 - a. Toy car rolling down a hall
 - b. Paper airplane flying across the room
 - c. A stretched rubber band
 - d. A baseball being pitched
6. Rank the levels of organization from the most complex to the least complex.
 - a. Organism, population, community, ecosystem
 - b. Ecosystem, community, population, organism
 - c. Population, community, organism, ecosystem
 - d. Community, population, ecosystem, organism

7. Why would this be classified as a prokaryote?

- a. It has a nucleus-bound organelle
- b. It contains genetic material
- c. It is multicellular
- d. It does not have a nucleus



8. Plants are organisms that contain numerous cells. This means that plants are considered –

- a. Unicellular
- b. Multicellular
- c. Prokaryotic
- d. Heterotrophic

9. Why is alcohol currently used in glass thermometers?

- a. It is denser when heated
- b. It is more soluble when cooled
- c. It has less mass when cooled
- d. It expands when heated

10. What symbiotic relationship is shown between the tree and the squirrel?

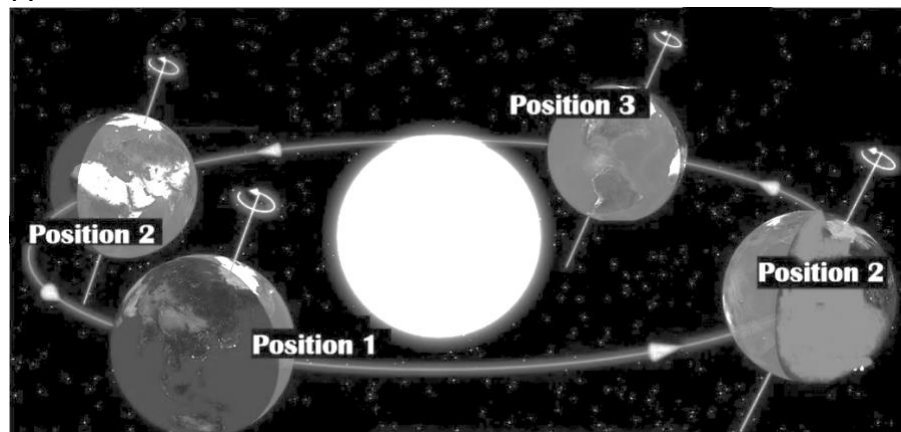
- a. Competition
- b. Mutualism
- c. Commensalism
- d. Parasitism



11. Hummingbirds have long, tubular structures used to get nectar from flowers. Which is most similar to a hummingbird's beak?

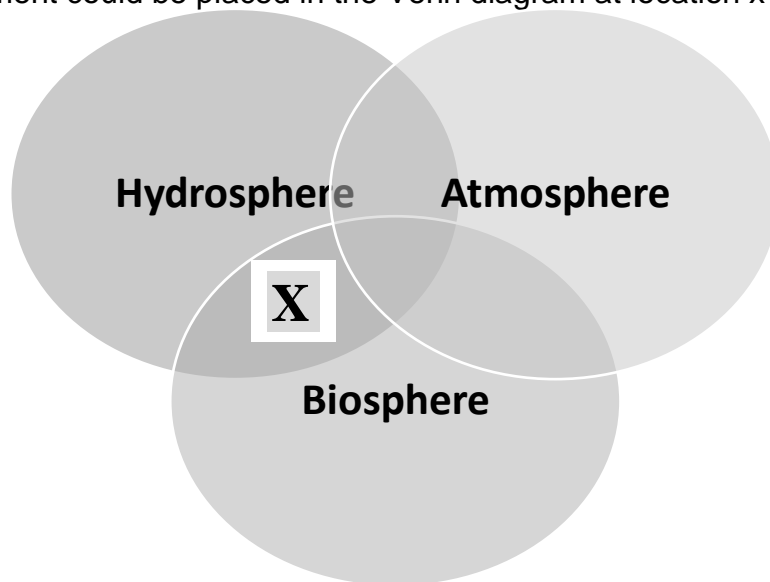
- a. Needle nose pliers
- b. Straw
- c. Forceps
- d. Bug net

12. Based on the diagram, what seasons would the southern hemisphere be at position 1?

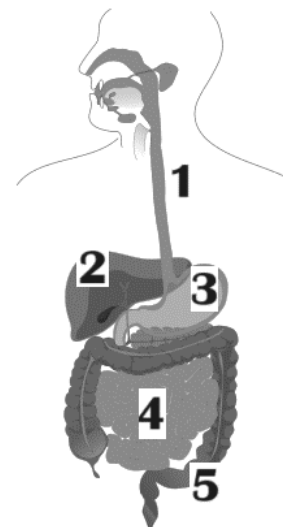


- a. Fall
- b. Winter
- c. Spring
- d. Summer

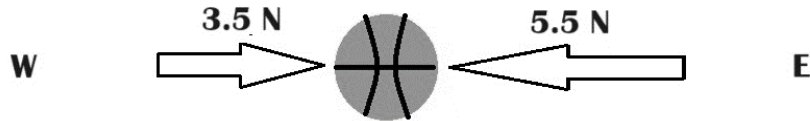
13. Which of the following statements about solar energy is FALSE?
- a. Solar energy travels in electromagnetic waves
 - b. Solar energy doesn't require a media to travel through
 - c. Solar energy is available at all times, day and night
 - d. Solar energy is considered a clean energy source
14. Which planet species would have the advantage to survive in an environment with numerous plant-eating bugs?
- a. Plants with a darker color
 - b. Plants that experience an increase in predators
 - c. Plants with a larger surface area
 - d. Plants that produce bad-tasting chemicals
15. Which statement could be placed in the Venn diagram at location x?



- a. Fish swimming in an ocean
 - b. Birds flying in the sky
 - c. Sun shining on a mountain
 - d. Water evaporating
16. Which of the following sections of the digestive system is least likely to have a chemical change occur?
- a. 1
 - b. 2
 - c. 3
 - d. 4



17. Based on the images, in which direction and with what force will the basketball move?



- a. West at 9 N
- b. West at 2 N
- c. East at 9 N
- d. East at 2 N

18. It takes three hours to drive a total of two hundred miles. Using this information, the ____ of the object would be determined.

- a. Instantaneous speed
- b. Velocity
- c. Displacement
- d. Average speed

19. Based on the following characteristics, correctly identify the boundary described.

- Can create a mid-ocean ridge
- Occurs where two tectonic plates move away from each other

- a. Convergent
- b. Transformative
- c. Divergent
- d. Hotspot

20. A student wants to model the path a frog takes when it jumps and returns to the ground. Which of the following is the best way to represent the shape?

- a. Pushing a box on the floor
- b. Pushing a ball off a table
- c. Using a magnet to attract a spoon
- d. Throwing a free throw

21. A set of blocks are stacked as shown. Where would heat be transferred downward?

- a. Sample 1 to 2
- b. Sample 2 to 3
- c. Sample 1 to 3
- d. Sample 2 to 1

1	48°C
2	55°C
3	52°C

22. Newton made important discoveries concerning forces and gravity. These discoveries would be most beneficial for which of the following professions?

- a. Astronomer
- b. Biologist
- c. Psychologist
- d. Electrician

23. How many of the following characteristics allow Earth to maintain a suitable temperature for maintaining life?

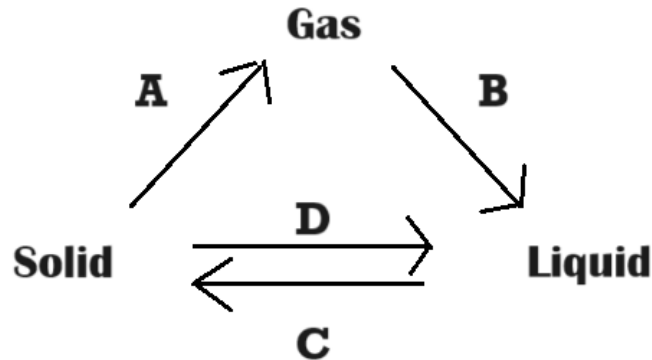
- The distance from the sun
- A solid crust
- Mountain and valley formations
- Carbon dioxide in the atmosphere
- Lunar cycle of 28 days

- a. 1
- b. 2
- c. 3
- d. 4

24. A model of Earth's day and night cycle is created using a small ball and toothpicks. A flashlight is used to represent the sun in this model. What needs to be done to demonstrate the day and night cycle correctly?

- a. Rotate the flashlight
- b. Tilt the ball
- c. Spin the ball
- d. Lift the ball up and down

25. Which would be the most appropriate for the diagram shown?



- a. A shows the particles becoming more tightly packed
- b. B shows the temperature increasing
- c. C shows the particles becoming more widely spaced
- d. D shows the kinetic energy of the particles increasing

26. Magnetic striping in the sea floor spreading is evidence to support the plate tectonic theory. Which of the following statements best supports this?

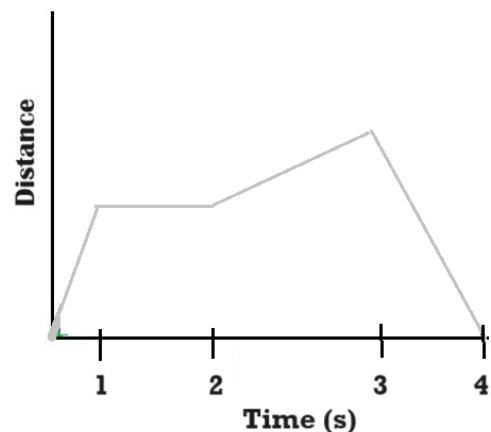
- a. A theory that describes that energy is not created or destroyed
- b. A theory that describes how the lithosphere is divided and how it moves
- c. A theory that describes the survival of the fittest
- d. A theory that describes how the climate changes

27. What change could decrease the negative effect of bycatching from the commercial fishing industry?

- a. Fish in different locations periodically
- b. Decrease the size of the fishing nets
- c. Fish in deeper regions of the ocean
- d. Redesign the fishing nets

28. What does the graph show about the object's movement from three to four seconds?

- a. It remains stationary
- b. It speeds up
- c. It returns to the starting point
- d. It increases the displacement

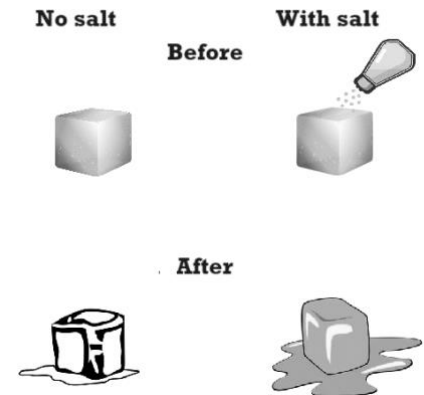


29. How are the nutrients returned back to the soil?

- a. Detritivores recycle decaying matter
- b. Organisms deposit it directly into the soil
- c. It is absorbed through the air
- d. Paper products being recycled

30. Two ice cubes are set on a countertop. Salt is sprinkled over one of the ice cubes. Based on the image shown, which statement is true?

- a. The salt stops the ice from melting
- b. The salt makes the ice melt faster
- c. The salt makes the ice double in size
- d. The salt makes the ice remain frozen longer



31. Which of the following has the longest wavelength?

- a. X-rays
- b. Ultraviolet waves
- c. Microwaves waves
- d. Infrared waves

32. A ball rolls towards the right. Which image shown will continue to accelerate to the right?

a.



c.



b.



d.



33. Which component of the universe has more mass than the solar system?

- a. Jupiter
- b. Moon
- c. Star
- d. Nebula

34. Warm air rises from the ground, and cool air sinks to the ground. What drives this process?

- a. Radiant energy from the sun
- b. Geothermal energy from the earth
- c. Precipitation
- d. Movement of air masses

35. This theory suggests that the universe always expands but maintains a constant average density. Which of the following best matches this statement?

- a. Oscillating universe
- b. Steady state
- c. Kepler's universe
- d. Anthropic

36. Based on the data, which star will most likely become a supernova?

Star	Solar Mass
A	2
B	1
C	10
D	5

- a. Star A b. Star B c. Star C d. Star D

37. If the rotation of the earth was altered and became faster, which statement is most likely?

- a. The day would be shorter
- b. The seasons would be longer
- c. The tides would be much stronger
- d. The seasons would not change

38. Students constructed galaxies using pebbles in class. The following describes how each student created their models.

-
- Student 1 used pebbles and arranged the pebbles in a large swirl pattern
 - Student 2 used pebbles and arranged the pebbles in a circle
 - Student 3 used pebbles and dropped the pebbles and let them fall everywhere
 - Student 4 used pebbles and stacked the pebbles on top of each other like a tower
-

Which student best represented an irregular galaxy with the model they created?

- a. Student 1 c. Student 3
- b. Student 2 d. Student 4

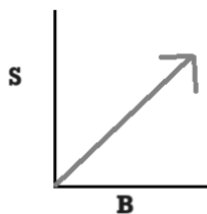
39. A clear water bottle is filled halfway with soil. Then, a thermometer is placed in the bottle and sealed. A desk lamp is turned on and placed so that it shines on the sealed container. Which would most help to demonstrate the effect of greenhouse gases on temperature?

- a. By adding soil and water to the bottle
- b. By removing the soil and increasing the wattage of the light
- c. Add a second smaller container
- d. Add bubble wrap around a second identical bottle

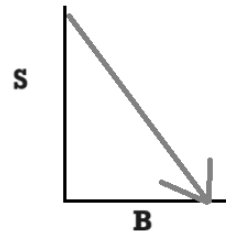
40. What is most directly responsible for the cooling effect after the eruption of a volcano?
- The sun
 - The volcanic ash
 - The jet stream
 - Precipitation
41. Which of the following would be a long-term change to the environment that could affect organisms and possibly future generations?
- A tornado
 - A forest fire
 - A volcanic eruption
 - A hurricane
42. Which of the following has the most positive effect from humans on the environment?
- Deforestation
 - Coal power plants
 - Internal combustion engine usage
 - Windmills
43. A road is built for a new housing addition but due to financial issues, no homes were ever constructed. After a year, with no activity, which most likely will be observed?
- Trees begin to grow over the road
 - Weeds begin to grow in cracks in the road
 - Shrubs and animals become abundant in the area
 - Bushes begin to grow and flourish
44. Gregor Mendel's contribution to science is most related to the work of a –
- Pathologist
 - Archaeologist
 - Engineer
 - Geneticist

45. Which sketch correctly shows how biodiversity and sustainability are related?

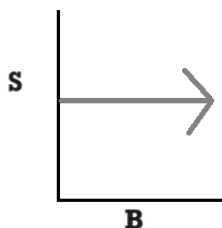
a.



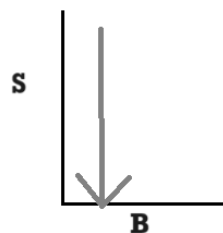
c.



b.



d.



46. The body is constantly regulating to maintain homeostasis. Which two systems work together to regulate internal and external conditions?
- a. Muscular and digestive
 - b. Respiratory and digestive
 - c. Nervous and muscular
 - d. Nervous and endocrine

47. When moving down a column in the Periodic Table, which of the following stays the same?
- a. The atomic mass
 - b. The number of valence electrons
 - c. The atomic number
 - d. Chemical reactivity

The image shows a standard periodic table of elements. A large, thick black arrow is superimposed on the table, pointing downwards from the top center towards the bottom center. The arrow's tip is positioned between the groups of elements that include Lanthanum (La) and Actinium (Ac), specifically pointing towards the space where the lanthanide and actinide series are typically inserted. The periodic table includes elements from Hydrogen (H) to Oganesson (Og), with the lanthanide and actinide series shown as separate rows at the bottom.

- 48. Why do radio waves and infrared waves not have enough energy to damage cells in the human body?
 - a. As wavelength increases, the waves become more harmful.
 - b. As wavelength decreases, the waves become less harmful.
 - c. As frequency decreases, the waves become less harmful.
 - d. As frequency increases, the waves become less harmful.
- 49. Students work in groups to create a filtration system to filter particles from running water. The students draw a schematic and create a prototype of their group's filtration system. Which activity would best incorporate the science and engineering practice of applying mathematical concepts into the project?
 - a. Averaging the amount of water each student uses at home in a day
 - b. Calculating the amount of water that their system can filter in an hour
 - c. Estimating the cost of building a larger version of each of the filters
 - d. Counting the number of large particles their filter removes from the water
- 50. A group of students created a model during an engineering design activity that did not perform as effectively as they had anticipated. Which of the following steps would be best for the students to do next?
 - a. Make adjustments to meet the parameters of the activity
 - b. Research similar studies to validate the results
 - c. Start the investigation over from the beginning
 - d. Repeat the investigation to replicate the results

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-2025 SCIENCE
INVITATIONAL TEST**

Answer Key

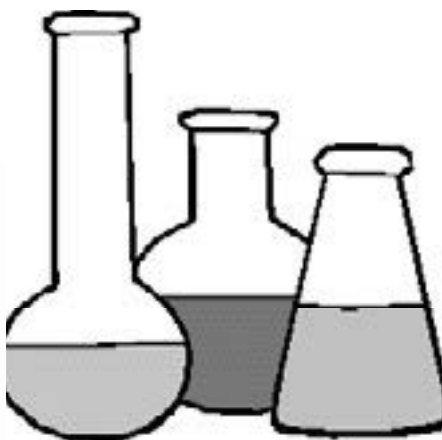
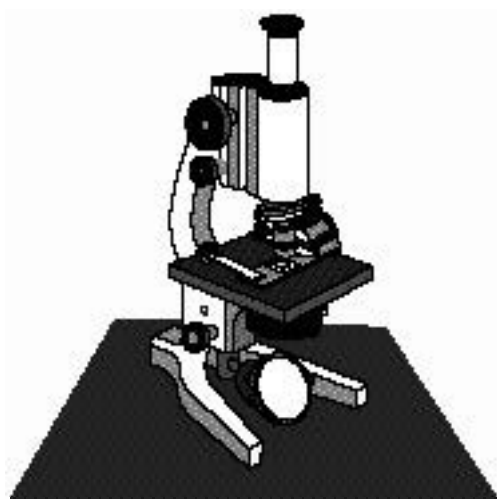
1. C	18.D	35.B
2. A	19.C	36.C
3. A	20.D	37.A
4. B	21.B	38.C
5. C	22.A	39.D
6. B	23.B	40.B
7. D	24.C	41.C
8. B	25.D	42.D
9. D	26.B	43.B
10.C	27.D	44.D
11.B	28.C	45.A
12.A	29.A	46.D
13.C	30.B	47.B
14.D	31.C	48.C
15.A	32.D	49.B
16.A	33.D	50.A
17.B	34.A	

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Science

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

UNIVERSITY INTERSCHOLASTIC LEAGUE

2024-2025 A+ SCIENCE

FALL/WINTER TEST

- Which of the following can be classified as a compound?
 - Sand
 - Dirt
 - Silver ring
 - Hydrogen peroxide
- What happens to the kinetic energy of atoms in a liquid as it is heated and how does the motion of the atoms differ?
 - Atoms begin to move faster, spread out, and becomes a gas
 - Atoms begin to move slower, condense, and becomes plasma
 - Atoms begin to move slower, spread out, and take a solid form
 - Atoms begin to move faster, condense, and become a solid
- Seasons bring changes in weather. Which most likely explains why summers in most parts of the world are hotter than other times of the year?
 - The earth's rotation is closer to the sun
 - The sun's rays shine directly on the earth
 - The earth's revolution is unstable
 - The earth tilts away from the sun
- Which of the following is NOT used to determine if a substance is a mixture or a pure substance?
 - Separating chemically
 - Filtering
 - Evaporating
 - Separating physically
- Which statement does NOT show an example of potential energy?
 - Jumping on a pogo stick
 - Pulling an arrow back to launch it from a bow
 - Skateboard rolling down a sidewalk
 - Ball sitting at the top of a hill

	Group 1																		Group 18
Period 1	H																		He
Period 2	Li	Be																	
Period 3	Na	Mg																	
Period 4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	
Period 5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
Period 6	Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	
Period 7	Fr	Ra		Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og	
			Lanthanides																
			La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu		
			Actinides																
			Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr		

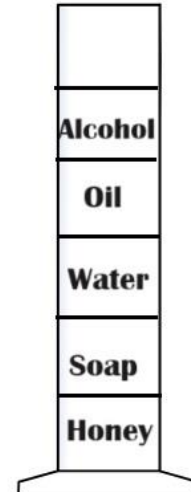
- Which elements on the periodic table are metallic, normally found in small quantities and mixed with other elements?
 - 1
 - 2
 - 3
 - 4

7. Which is NOT a part of the geosphere?

- a. Molten magma
- b. Sand
- c. Fossils
- d. Air

8. Students created a density column as shown. Which of the following statements is incorrect?

- a. Water is less dense than alcohol
- b. Honey is the most dense
- c. Alcohol is less dense than oil
- d. Soap is denser than water



9. A local school installed several solar panels to help provide electrical energy for the school. During which time period would the school not have a large electric bill?

- a. Cold, cloud winter month
- b. Rainy, warm month in autumn
- c. Cold, rainy spring month
- d. Hot, dry summer month

10. A child is playing on a see saw at the playground. What contact force acts to make the see saw move?

- a. Normal force
- b. Applied force
- c. Gravity
- d. Friction

11. A student placed a birdfeeder in their backyard. Very few birds were seen during the winter months compared to the spring months. Which most likely explains these observations?

- a. The bird migrated
- b. The birds hibernated
- c. The birds ate berries
- d. The birds were building nests

12. A tennis ball hits a racket with 50 N of force. What is the force and direction exerted by the ball on the racket?

- a. 100 N in the same direction
- b. 100 N in the opposite direction
- c. 50 N in the opposite direction
- d. 50 N in the same direction

13. Which is NOT an interaction that illustrates a commensalistic relationship?

- a. Tree frogs and plants
- b. Egrets and cattle
- c. Pseudoscorpions and beetles
- d. Bats and pitcher plants

14. Which statement is true about the image shown?



- a. Horizontal forces are unbalanced
- b. Horizontal forces are balanced
- c. Vertical forces are unbalanced
- d. Vertical forces are balanced

15. Determine which of the following statements best describes a level of organization.

- a. Ducks swim in a pond while fish swim underwater constitute an ecosystem
- b. A pride of lions constitutes an organism
- c. Several cats from the same litter constitute a community
- d. Butterflies getting nectar from a flower constitutes a cell

16. Which of the following is a product resulting from the chemical change during photosynthesis?

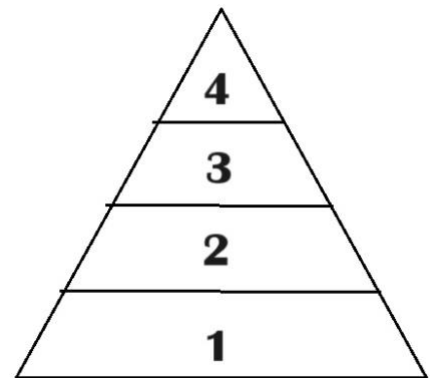
- a. Water
- b. Carbon dioxide
- c. Glucose
- d. Light

17. Which will NOT increase the rate of dissolution of solid solutes in an aqueous solution?

- a. Stirring or crushing
- b. Adding water
- c. Increase the temperature
- d. All of these

18. Based on the energy pyramid shown, which of the following would be correct about how energy transfers within an ecosystem?

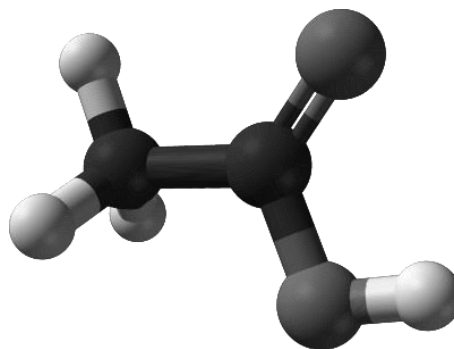
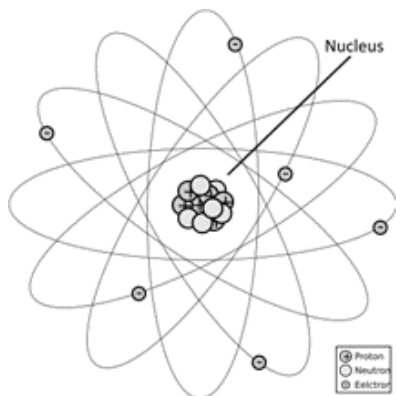
- a. Organisms at level four give indirect energy to all the consumers in the ecosystem
- b. Energy transfers directly from organisms at level two to organisms at level three
- c. Organisms at level one give direct energy to organisms in levels three and four
- d. All organisms receive 50% energy from the previous energy level



19. A student measures a cup of iced lemonade. The system's mass is 150 g. One hour later, the ice completely melted. What change occurred, and what is the system's mass now?

- a. Physical change; 100 g
- b. Chemical change; 150 g
- c. Physical change; 150 g
- d. Chemical change; 100 g

20. How are the two substances shown different?



- a. Both substances are elements
 - b. Both substances are molecules
 - c. The substance on the left is a molecule, and the substance on the right is an atom
 - d. The substance on the left is an atom, and the substance on the right is a molecule
21. A car travels north for two hours and has a displacement of ninety miles. A second car travels north for four hours and also has a displacement of ninety miles. Which correctly identifies the similarity between the motion of the cars?
- a. Both cars travel at the same speed and travel the same displacement
 - b. Both cars travel at the same displacement and travel in the same direction
 - c. Both cars travel at the same time and travel at the same velocity
 - d. Both cars travel at the same velocity and travel in the same direction
- 22.

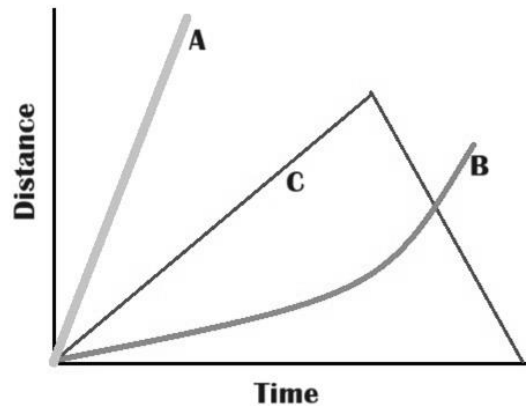


Based on this chemical formula, there are ___ more oxygen atoms than phosphorus atoms.

- a. 1
 - b. 2
 - c. 3
 - d. 4
23. Which celestial object does not continuously orbit another body within the solar system?
- a. Jupiter's moon Europa
 - b. Stars
 - c. Comets
 - d. Asteroid

24. Which statement doesn't indicate that a physical change occurred?

- a. Drink mix is placed into water, and it dissolves
- b. Water boiling on a stove top
- c. Ice cream melting
- d. Two liquids are combined and a precipitate forms

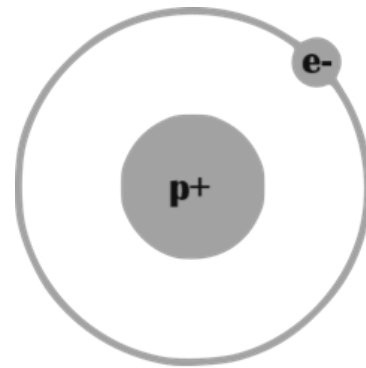


25. Three objects are tossed in the air, and the data is shown in the graph. Which correctly describes object A's path?

- a. The object is moving faster each second
- b. The object is moving at a constant fast speed
- c. The object is not moving
- d. The object is moving at a constant speed to return to the origin

26. Based on the hydrogen atom shown, choose the best statements that describe the atom's charge.

- a. Hydrogen has three subatomic particles, making it a negative charge atom
- b. Hydrogen has three subatomic particles, making it an atom with no charge
- c. Hydrogen has two subatomic particles, making it a negative charge atom
- d. Hydrogen has two subatomic particles, making it an atom with no charge



27. The gravitational attraction between two objects is increased the most when –

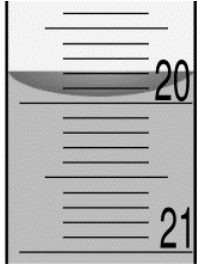
- a. The mass decreases, and the distance increases
- b. The mass decreases, and the distance decreases
- c. The mass increases, and the distance decreases
- d. The mass increases, and the distance increases

28. When mixed together, which will form a solution?

- a. Sand and salt
- b. Water and drink mix
- c. Sand and water
- d. Salt and pepper

29. Which human activity most likely leads to subsidence?

- a. Using toxic chemicals for pesticides
- b. Removing pollutants from water
- c. Storing rainwater in above-ground tanks
- d. Removal of water from aquifers

30. Salt is poured into a glass of water and then a spoon is used to stir the water. The salt seems to disappear because it is –
- a. Melting
 - b. Evaporating
 - c. Reducing the surface area
 - d. Freezing
31. Choose which statement does NOT describe the characteristics of a neutron.
- a. Total number of neutrons can change
 - b. Neutron determine the identity of the element
 - c. Neutrons are located in the nucleus of the atom
 - d. Neutrons have the mass of 1 amu
32. Which two properties of water are represented in the image shown?
- a. Adhesion and cohesion
 - b. Adhesion and surface tension
 - c. Cohesion and surface tension
 - d. Gravity and polarity
- 
33. How do melting points of helium, beryllium, and carbon relate to their position on the periodic table?
- a. Increased number of protons reduces the melting point
 - b. Decreased number of protons reduces the melting point
 - c. Increased number of protons increases the melting point
 - d. Decreased number of protons increases the melting point
34. Which statement is true about a homogeneous mixture?
- a. They are always chemically combined
 - b. They only contain one material
 - c. The composition is uniform throughout
 - d. They are always made up of two different atoms
35. Grape juice, soda, mouthwash, and a cleaning solution were tested by dipping a strip of test paper in each solution. The test strips were then compared to a color chart. What test was performed?
- a. Sugar test
 - b. Dissolved oxygen test
 - c. Salinity
 - d. pH test
36. A student investigates how Newton's laws of motion are incorporated into a softball game. Which description does NOT describe the law of inertia?
- a. A player swings a bat forward until it comes in contact with the ball.
 - b. The acceleration of the ball is dependent on the ball's mass and the force applied by the bat.
 - c. Once pitched, the ball moves and will continue to move until the bat makes contact with it or the catcher stops it.
 - d. A player walking back to the dugout.

37. A student measures 20 g of baking soda into a sealable bag. Then, 30 mL of vinegar (30 g) is poured into the bag and sealed. A reaction occurs. Based on the law of conservation of mass, how much mass does the bag contain?

- a. 10 g
- b. 20 g
- c. 30 g
- d. 50 g

38. Which characteristic would be expected for a solution that is basic to have?

- a. High pH and feels slippery
- b. Low pH and tastes bitter
- c. Low pH and sour taste
- d. High pH and feels sticky

39. A baseball curves as it is pitched from the mound to home plate due to air resistance. This is a result of –

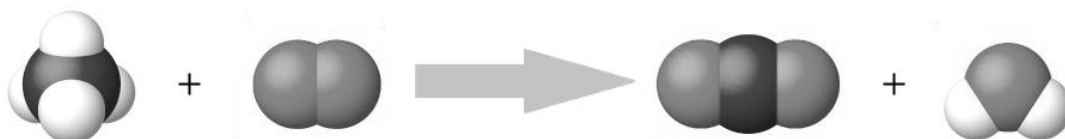
- a. Newton's laws of gravitation
- b. Newton's first law of motion
- c. Newton's second law of motion
- d. Newton's third law of motion

40. Which atomic models correctly show the law of conservation of mass?

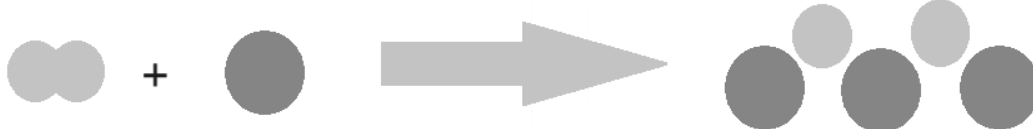
a.



b.



c.



d.



41. Students were testing the effect of forces by pushing two objects with same force across the floor. Object one has a mass of 20 kg, and object two has a mass of 25 kg. Which statement best describes the motion of these objects?

- a. Object one will travel a farther distance with a greater speed
- b. Both objects will move in the same direction at the same speed
- c. Object two will travel a farther distance with a lower speed
- d. Both objects move in opposite directions with object two having a greater speed

42. Which of the following statements correctly identifies the relationship shown in the electromagnetic spectrum?

- a. As wavelength increases, so does the frequency
- b. As frequency increases, you will reach radio waves
- c. As wavelength decreases, the energy will increase
- d. As wavelength decreases so does the frequency

43. What type of heat transfer is used to heat food in a microwave oven?

- a. Conduction
- b. Radiation
- c. Convection
- d. Neutralization

44. Which of the following is used in the medical field to kill pathogens on equipment?

- a. Ultraviolet waves
- b. Radio waves
- c. X-rays
- d. Microwave

45. The magnitude of a star's brightness is most dependent upon –

- a. Density
- b. Temperature
- c. Mass
- d. Shape

46. Three groups of students each design and build a device to protect a raw egg when dropped to the ground from a height of 12 m. The students drop the devices with the eggs inside and record some data for each device, as shown in the data table. This investigation can be classified as which of the following?

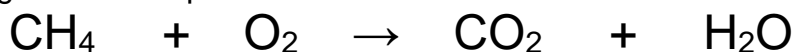
Group	Mass of Egg (kg)	Time to Stop Egg (s)
1	0.06 kg	0.01 s
2	0.06 kg	0.08 s
3	0.06 kg	0.1 s

- a. Experimental
- b. Comparative
- c. Descriptive
- d. Design

47. What statement best describes the membrane-bound organelles and the relationship between different types of cells?

- a. Both prokaryotic and eukaryotic cells contain membrane-bound organelles.
- b. Mitochondria are the powerhouses of cells, and cells without mitochondria are unable to convert energy.
- c. Membrane-bound organelles are found in prokaryotes, not eukaryotes.
- d. Membrane-bound organelles are found in eukaryotes, not prokaryotes.

48. The following chemical equation shows the combustion of methane:



Which of the following options would balance this equation correctly using the law of conservation of mass?

- a. Place a coefficient of 2 in front of both reactants.
- b. Place a coefficient of 2 in front of the CH_4 on the reactant side and 2 in front of the H_2O on the product side.
- c. Place a coefficient of 2 in front of the oxygen on the reactant side and 2 in front of the H_2O on the product side.
- d. Place a coefficient of 2 in front of the CO_2 on the product side and 2 in front of the H_2O on the product side.

49. On a roller coaster, where would the most work be done on the system?

- a. As it goes up the second highest hill
- b. As it drops down the highest hill
- c. As it drops down the second highest hill
- d. As it rounds a small curve in the track

50. Using the data from the table shown, determine the total distance traveled by the object.

Position (m)	Time (s)
0	0
2	1
4	2
4	3
10	4
5	4

- a. 25 m
- b. 15 m
- c. 5 m
- d. 10 m

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-2025 SCIENCE
FALL/WINTER TEST**

Answer Key

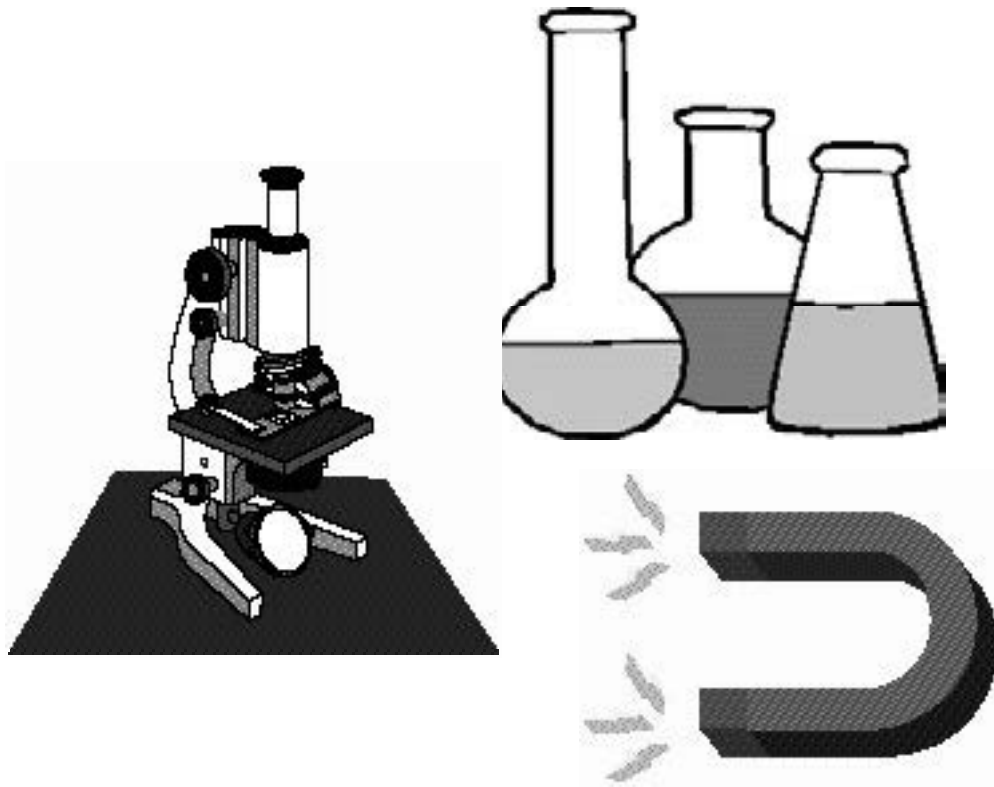
1. D	18.B	35.D
2. A	19.C	36.B
3. B	20.D	37.D
4. A	21.B	38.A
5. C	22.C	39.B
6. B	23.B	40.D
7. D	24.D	41.A
8. A	25.B	42.C
9. D	26.D	43.B
10.B	27.C	44.A
11.A	28.B	45.C
12.C	29.D	46.A
13.D	30.C	47.D
14.A	31.B	48.C
15.A	32.A	49.B
16.C	33.C	50.B
17.B	34.C	

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Science

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

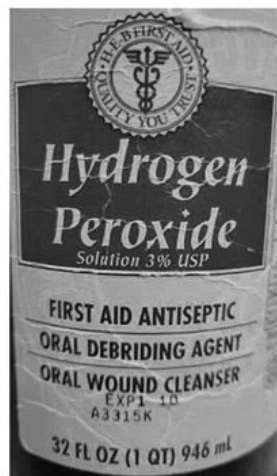
**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-2025 A+ SCIENCE
SPRING TEST**

1. As a liquid is boiled, what happens to change the volume of the substance?
 - a. As heat is taken away, the volume becomes more definite
 - b. Heat causes the molecules to move slower, taking up less space
 - c. Heat causes the molecules to move rapidly, spread out, and take up more space
 - d. As heat is taken away, the molecules grow bigger and spread out
2. Which of the following statements best represents a behavioral adaptation in a plant?
 - a. Thorns on roses to help prevent organisms from eating the plant
 - b. The movement or growth of a plant towards water
 - c. The odor emitted by flowers to attract pollinators
 - d. Edible roots of carrots and beets, which are specialized for food storage
3. Based on the images, which of the following is true?

Inert
Gas



X



Y

- a. X and Y are both elements
- b. X and Y are both compounds
- c. X is a compound and Y is an element
- d. X is an element and Y is a compound

4. During a demonstration, a mosquito lands in a petri dish full of water. What property of water is observed and how does it happen?
- Since water is a polar molecule, it allows charges to cancel out to allow the mosquito to float
 - Adhesion causes water to attract the mosquito to hold it up
 - Cohesion causes water to attract to other water molecules to hold the mosquito up
 - Surface tension allows the mosquito to float because water attracts to other water molecules
5. How many descriptions of rare earth elements are correct?
- Found in small amounts, mixed with other elements*
 - Used in smartphones, digital cameras, and flat-screen TVs*
 - Found in actinide and lanthanide series*
 - Found only in a gaseous state*
- a. 1 b. 2 c. 3 d. 4
6. On the fourth of July, a student watched a display of fireworks. What is NOT evidence that there is a chemical change in the fireworks?
- The size of the fireworks
 - The temperature change
 - The production of light
 - The color change
7. A student determines the density of two objects. The two objects are then placed in liquid dish soap, which has a density of 1.1 g/mL. Which statement is supported by the data shown?
- | Object | Density |
|--------|----------|
| 1 | 1.5 g/mL |
| 2 | 0.9g/mL |
- Both objects will sink
 - Both objects will float
 - Object 1 will float and Object 2 will sink
 - Object 1 will sink and Object 2 will float
8. Which solute would NOT dissolve the fastest in a solvent?
- Granulated sugar
 - Ground salt
 - Salt granules
 - Powdered sugar
9. While moving houses, a kid is pushing a box across the living room floor. How is friction at work in this scenario?
- Friction opposes the applied force and creates heat
 - Friction results from the push or pull and is greater than the applied force
 - Friction attracts the box to the floor
 - Friction helps the move easier

10. A family traveled from Austin to Lubbock. They left at 12 pm and traveled 175 miles before they stopped to eat. Then, they continued an additional 195 miles before they arrived at the destination at 7 pm. What was the average speed for this trip?

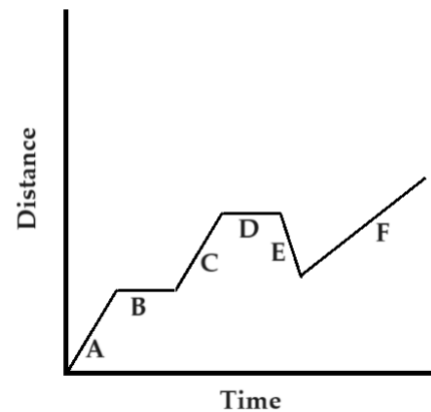
- a. 185 mph
- b. 29 mph
- c. 25 mph
- d. 53 mph

11. A student throws a ball straight up into the air. Which correctly describes the forces in the scenario?

- a. Horizontal unbalanced and vertical balanced
- b. Horizontal balanced and vertical unbalanced
- c. Both horizontal and vertical are balanced
- d. Both horizontal and vertical are unbalanced

12. Which line segments show the object is at rest?

- a. A and C
- b. E and F
- c. B and D
- d. C and E



13. Earth would no longer have seasons if –

- a. Earth were to have longer revolutions around the sun
- b. Earth were to revolve in the opposite direction
- c. Earth was not tilted
- d. Earth was located farther away from the sun

14. Which of the objects would NOT demonstrate the motion due to unbalanced forces?

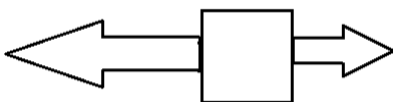
a.



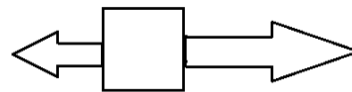
c.



b.



d.



15. Correctly order the development of the cell theory based on the statements provided.

- I. Hooke views corks cells in a microscope*
- II. Schleiden discovered cells in a plant*
- III. Schwann determined animal cells have cells*
- IV. Virchow stated cells come from existing cells*

- a. I, II, III, IV
- b. II, I, IV, III
- c. IV, III, II, I
- d. III, I, II, IV

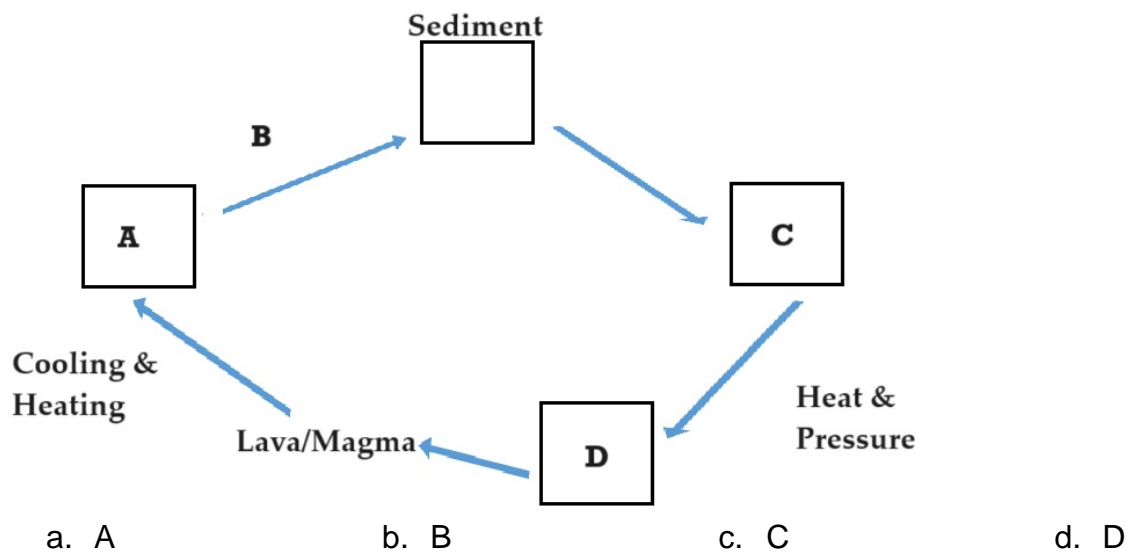
16. Outside of the solar system, a grouping of icy particles that orbits the sun is known as

- a. Asteroid belt
- b. Oort cloud
- c. Kuiper belt
- d. Milky way

17. Satellites are launched into orbit using rockets. Why doesn't the satellite continue moving straight into outer space?

- a. The gravity of the sun pushes it into orbit around the planet
- b. Friction causes it to orbit around the planet
- c. Earth's gravity pulls it into orbit around the planet
- d. The normal force pushes it into orbit around the planet

18. Which letter best represents an igneous rock?



19. The San Andres fault located in California is prone to earthquakes from which tectonic plate process?

- a. The sliding of the plates
- b. The melting of the plates
- c. The weathering of the plates
- d. The separating of the plates

20. What is one key difference between the components of the biosphere and the geosphere?
- The biosphere includes abiotic components, while the geosphere includes biotic
 - The biosphere includes biotic components, while the geosphere includes abiotic
 - Both the biosphere and geosphere include biotic components
 - Both the biosphere and geosphere only include abiotic components
21. Which would NOT be beneficial for groundwater?
- Reducing the use of fertilizers
 - Proper disposal of chemicals
 - Increasing the use of pesticides
 - Pick up of animal waste
22. All of the following are ways that conservation can help manage air resources EXCEPT –
- Limit the amount of burning outdoors
 - Using energy efficient appliances
 - Using more wind turbines to generate electricity
 - Making multiple trips to town in a car
23. Some ocean organisms photosynthesize. During this process, these organisms produce a necessary substance for humans. Which substances do humans most rely on?
- Nitrogen
 - Carbon dioxide
 - Oxygen
 - Hydrogen
24. The image shows the positions of the Earth, Moon, and Sun.



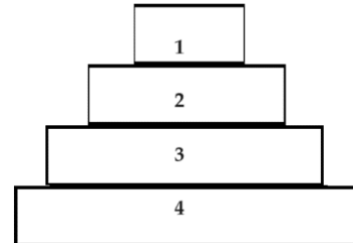
- A ____ tide is best represented in this image. When this occurs, there will be a ____ gravitational pull on the ocean tides.
- Spring; lower
 - Spring; greater
 - Neap; lower
 - Neap; greater
25. Which body system is responsible for communicating using hormones?
- Endocrine
 - Nervous
 - Digestive
 - Immune

26. Which of the following is NOT done to help decrease malnutrition in children worldwide?

- a. Decrease the access to electricity
- b. Increase the access to clean water
- c. Provided educational pamphlets in people's native language
- d. Increase access to healthcare

27. At which level would you find the least amount of energy?

- a. Primary consumers
- b. Secondary consumers
- c. Tertiary consumers
- d. Producers



28. Students are creating a model of a plant. Yarn is used for the roots, straws are used for the stems, and cotton swatches are used for the leaves.

Which best describes how these materials can model the hierarchical levels between organs and the whole plant?

- a. Yarn, straws, and cotton are all used to support the organs in the plant
- b. Yarn, straws, and cotton are used to illustrate the cells of the plant
- c. Yarn, straws, and cotton are used to illustrate how organs comprise a cell
- d. Yarn, straws, and cotton are used to show how organs combine to form different systems in a plant

29. Advancements in which tool enabled scientists to develop the cell theory?

- a. Magnifying lens
- b. Telescope
- c. Microscope
- d. Phone

30. Plants have more than one cell, and each cell has a nucleus. Which terms can best be used to classify the characteristics of these organisms?

- a. Prokaryotic and autotrophic
- b. Eukaryotic and unicellular
- c. Heterotrophic and prokaryotic
- d. Multicellular and eukaryotic

31. Some butterflies have longer wings, which maybe a survival advantage in –

- a. Migration
- b. Windy coastal regions
- c. Species with short life spans
- d. Pollination

32. What type of heat transfer is most likely occurring at position C while the pot is sitting directly on the flame burner?

- a. Conduction
- b. Convection
- c. Radiation
- d. Thermal



33. Which analogy best represents the function of the cell membrane within a cell compared to a house?

- a. Similar to a bookshelf because it contains reference information
- b. Similar to a door because it allows things to go in and out
- c. Similar to a light because it provides radiant energy
- d. Similar to a bathtub because it can hold water

34. Brown eyes are dominant to blue eyes. The female parent of an offspring is heterozygous, while the male parent is homozygous recessive. Can the male parent pass the allele for brown eyes to the offspring? Select the best answer.

- a. Yes, there is a 100% chance
- b. Yes, there is a 50% chance
- c. Yes, there is a 25% chance
- d. No, there is a 0% chance

35. How many of the substances listed are elements?

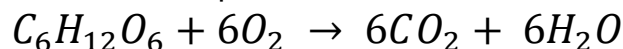
- a. 1
- b. 3
- c. 4
- d. 6

- O₂
- CO₂
- H₂O
- Br₂
- C
- NH₄

36. Students conducted a pH test of an unknown substance. The pH was determined to be 5. Is this substance an acid or base, and what other properties should it have?

- a. It is an acid and would feel sticky
- b. It is a base and would feel slippery
- c. It is an acid and would feel slippery
- d. It is a base and would feel sticky

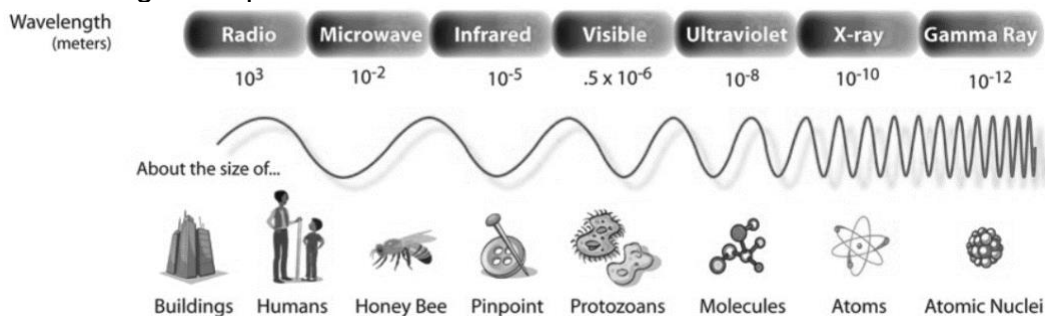
37. What atoms are present in this equation?



- a. Glucose, oxygen, carbon dioxide, and water
- b. Oxygen, carbon dioxide, water
- c. Carbon, hydrogen, oxygen
- d. Carbon, oxygen, sugar

38. What happens to the acceleration of an object if the force remains constant but the mass of the object was to decrease?
- The acceleration will decrease
 - The acceleration will increase
 - The acceleration remains constant
 - None of the above
39. Which of Newton's Laws of Motion best explains why you hit the right side of the seat when a car turns rapidly to the right?
- The law of universal gravitation
 - Newton's second law
 - Newton's third law
 - Law of Inertia

40. Identify how the amplitude changes as the wavelength decreases on the electromagnetic spectrum.



- The amplitude increases
 - The amplitude decreases
 - The amplitude remains constant
 - The amplitude will fluctuate
41. Which is used in the medical field because the wave can pass through certain human body parts?
- Infrared waves
 - Radio waves
 - Microwaves
 - X-rays
42. Which is matched with its correct description?
- Main sequence: stage of a star that is stable
 - Black hole: a protostar created from a nebula
 - Supernova: a collapsed core of a super giant
 - Quasar: the beginning stage of all stars

43. Based on the description, identify the type of galaxy movement.

- *Applies to objects that are moving towards us*
- *The wavelength becomes shorter*

- Redshift
- Blueshift
- Redshift and blueshift
- None of the above

44. What type of climate best describes people who live near Big Bend National Park?

- Cooler temperatures year-round and less precipitation
- Warmer temperatures year-round and more precipitation
- Cooler temperatures in the summer, warmer in the winter, and more precipitation
- Cooler temperatures in the winter, warmer in the summer, and less precipitation

45. The water cycle is –

- nature's way of increasing the amount of available water
- nature's way of neutralizing acid rain
- nature's way of recycling water
- nature's way of removing water

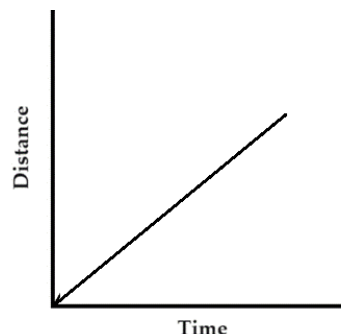
46. How would you describe the acceleration of the object based on the data provided?

Time (s)	Position (m)	Velocity (m/s)
0	0	7
1	7	7
2	14	7
3	21	7
4	28	7

- Initial positive acceleration, and then the acceleration is zero
- Initial acceleration is zero, and then the acceleration remains the same
- Initial acceleration is negative, and then the acceleration is positive
- Initial acceleration is zero, and then the acceleration is positive

47. What does the slope of the line represent about the motion of an object?

- a. The object is accelerating
- b. The object is decelerating
- c. The object moves at a constant speed
- d. The object is stationary



Position of Pendulum	Potential Energy (J)	Kinetic Energy (J)	Total Energy (J)
A	77.1	22.9	100
B	62.5	37.5	100
C	53.7	?	100

48. Determine the kinetic energy of the pendulum at position C.

- a. 153.7
- b. 46.3
- c. 60.4
- d. 93.3

49. Thomson's atomic model successfully explained the atom's overall neutrality. In 1904, Thomson developed what became known as the "plum pudding" model. In Thomson's plum pudding model of the atom, the electrons were embedded in a uniform sphere of positive charge, like blueberries stuck in a muffin. Which model best matches what Dalton described?

- a. Electrons orbiting the nucleus in energy levels
- b. Electron clouds orbiting a nucleus of the atom
- c. Atoms as small, solid balls
- d. A positive matrix with electrons embedded within

50. Human activity, such as deforestation, is affecting the carbon cycle. How has this activity interrupted the carbon cycle?

- a. Allows a buildup of carbon in our atmosphere.
- b. Does not cause any harm to the carbon cycle.
- c. Increase of leaves growing on trees.
- d. Does not harm ecosystems.

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-2025 SCIENCE
SPRING TEST**

Answer Key

1. C	18.A	35.B
2. B	19.A	36.A
3. D	20.B	37.C
4. D	21.C	38.B
5. C	22.D	39.D
6. A	23.C	40.C
7. D	24.B	41.D
8. C	25.A	42.A
9. A	26.A	43.B
10.D	27.C	44.D
11.B	28.D	45.C
12.C	29.C	46.A
13.C	30.D	47.C
14.A	31.A	48.B
15.B	32.A	49.D
16.B	33.B	50.A
17.C	34.D	

CONTESTANT NUMBER:

FOR GRADER USE ONLY

Score Test Below:

_____ Initials _____

_____ Initials _____

Papers contending to place:

_____ Initials _____



**University Interscholastic League
A+ Social Studies Contest • Answer Sheet**

Write your contestant number in the upper right corner, and circle your grade below.

Circle Grade Level:

5

6

7

8

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. A B C D

16. A B C D

17. A B C D

18. A B C D

19. A B C D

20. A B C D

21. A B C D

22. A B C D

23. A B C D

24. A B C D

25. A B C D

26. A B C D

27. A B C D

28. A B C D

29. A B C D

30. A B C D

31. A B C D

32. A B C D

33. A B C D

34. A B C D

35. A B C D

36. A B C D

37. A B C D

38. A B C D

39. A B C D

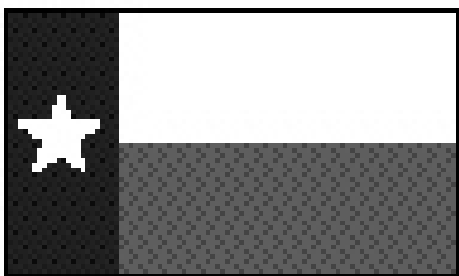
40. A B C D

INVITATIONAL 2024-2025

A+ ACADEMICS



University Interscholastic League



Social Studies

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ SOCIAL STUDIES
INVITATIONAL TEST – GRADES 5 & 6

1. The Virginia House of Burgesses was the first _____ in the British colonies.
A. elected legislature
B. bicameral assembly
C. appointed government
D. written constitution
2. The individuals that signed the Mayflower Compact were all _____.
A. clergy
B. soldiers
C. Puritans
D. male
3. The *Instructions for the Virginia Colony* stated that a river headed to the Northwest direction was the best choice to travel because _____.
A. It was the fastest way back to Europe
B. It was the direction of Canada
C. It was most likely to lead to the other sea
D. It was where the older colonies were located
4. Limited governments feature all of the following characteristics **EXCEPT** _____.
A. ensuring peaceful transitions of power
B. promoting economic freedom
C. protecting human rights
D. a single political party
5. India's economy features a large population. This allows the economy to provide _____ for service industries from around the world.
A. natural resources
B. labor
C. capital
D. technology
6. In an unlimited government, _____ and there are no limits on a ruler's authority.
A. laws only apply to authority figures
B. laws apply equally to everyone
C. laws are decided by the people
D. laws are used to control the people
7. The Speaker of the United States House of Representative is _____.
A. Kevin McCarthy
B. Nancy Pelosi
C. Hakeem Jefferies
D. Mike Johnson
8. The Spanish government was a _____ when Texas was a colony.
A. republic
B. theocracy
C. democracy
D. monarchy

9. Most of the British colonies were _____ with members of the community elected to make laws.
- A. under direct rule
 - B. royal charters
 - C. self-governing
 - D. run by a board of directors
10. The Jamestown colony was established in _____.
- A. 1620
 - B. 1598
 - C. 1607
 - D. 1637



11. Currently, _____ serves as the Vice President of the United States.
- A. Kamala Harris
 - B. Lisa Murkowski
 - C. Nikki Haley
 - D. Nancy Pelosi
12. Examples of cash crops in the southern colonies include _____.
- A. wheat and corn
 - B. beef and pork
 - C. rye and oats
 - D. cotton and tobacco
13. A(n) _____ best helps advanced economies develop technology and continue to advance.
- A. limited supply of capital
 - B. centralized government
 - C. educated labor force
 - D. large supply of natural resources



14. John Smith was a leader of _____ that helped them survive the harsh winters they faced after starting their settlement.
- A. Hartford
 - B. Jamestown
 - C. Roanoke
 - D. Plymouth

15. In societies with representative governments, there are three main categories of rights that are protected: personal rights, political rights, and _____.
A. religious rights
B. voting rights
C. educational rights
D. economic rights

Economic Traits of the Colonies

- Private ownership of land
- Access to natural resources
- Artisans able to produce and sell goods

16. The economic traditions of _____ influenced the colonists in North America to develop a free enterprise system for their economy.
A. England
B. the Netherlands
C. France
D. Spain
17. The U.S. economic system features significantly less _____ than a communist system.
A. consumer choice
B. government control
C. voluntary exchange
D. private property
18. An agricultural product that is farmed for its value for sale rather than its use to the farmer is known as _____.
A. subsistence farming
B. a bumper crop
C. a cash crop
D. livestock
19. March 2, 1836 is celebrated in the state of Texas because it is when _____.
A. Texas defeated Mexican troops at Goliad
B. Texas was admitted into the United States
C. Texas declared independence from Mexico
D. Texas left the Spanish empire
20. The British began colonizing the east coast of North America partially to compete with the colonies already started by the Spanish and _____.
A. Germans
B. Portuguese
C. Belgians
D. French
21. The land area that was authorized as a colony by *The Charter of Massachusetts Bay* was located between the Merrimack and the _____ Rivers.
A. Hudson
B. James
C. Potomac
D. Charles
22. The _____ was a conflict that took place in the North American colonies of France and Britain from 1754 to 1763.
A. War of Spanish Succession
B. French Revolution
C. French and Indian War
D. Anglo-French War

23. According to *The Instructions for the Virginia Colony*, _____ were not to be allowed to be between the settlement and the sea coast.

- A. large herd animals
- B. Native inhabitants
- C. enemy fortifications
- D. farming lands

24. *The Mayflower Compact* was signed on November 11, _____.

- A. 1607
- B. 1639
- C. 1620
- D. 1585

25. The colonies in North America were able to develop an economic system based on free enterprise largely due to their access to large amounts of _____.

- A. land and natural resources
- B. skilled labor
- C. capital and investments
- D. roads and canals

- First person to write detailed accounts about the people and environment of Texas
- Explored for Spain
- Survived the disastrous Narváez expedition of 1527

26. All of the above describe _____.

- A. Francisco Coronado
- B. Hernán Cortés
- C. Hernando de Soto
- D. Cabeza de Vaca

27. Under the free enterprise system in the United States, key economic questions are answered by _____.

- A. the elite
- B. the marketplace
- C. business leaders
- D. the government

28. The *Instructions for the Virginia Colony* warned against settling too close to the mouth of a river because _____.

- A. there would be more flooding and rain
- B. crops would not grow in the marshy areas
- C. an enemy could have success attacking
- D. Natives were likely to already live there

"We...do by these presents solemnly and mutually, in the presence of God and one another, covenant, and combine ourselves together into a civil body politick, for our better ordering and preservation...."

29. The excerpt above from *The Mayflower Compact* was signed by subjects of _____, the monarch of Great Britain.

- A. Queen Elizabeth
- B. King James
- C. Queen Victoria
- D. King George

30. A _____ government is based on the belief that power is held by the people and their concerns should be addressed by elected officials.

- A. parliamentary
- B. federal
- C. representative
- D. centralized

31. *The Charter of Massachusetts Bay* created a colony in the area known at the time as _____.
A. Quebec
B. New England
C. Maine
D. Boston
32. _____ are examples of limited governments in Southwest Asia.
A. Saudi Arabia and Iraq
B. Syria and Iran
C. Turkey and Israel
D. Qatar and Kuwait
33. The United States and Canada have very developed economies and are highly industrialized. Immigration is important in these countries to provide _____.
A. labor
B. capital
C. natural resources
D. technology
34. French explorers in Texas were motivated by the desire to start a colony that would give them access to _____.
A. the Mississippi River
B. the Hill Country
C. trade routes to Mexico
D. a Northwest Passage
35. The characteristic of the U.S. system of free enterprise that most helps produce better products and lower prices is _____.
A. private property
B. entrepreneurship
C. limited regulation
D. competition
36. All of the following are examples of civic participation **EXCEPT** for _____.
A. being informed about issues
B. starting a business
C. voting
D. supporting public policies
37. _____ is the active involvement of individuals at the local, state, and national levels of government.
A. charity work
B. civic participation
C. public awareness
D. self-employment
38. Some British colonists were active in _____ that generally featured small-scale production of goods at home.
A. subsistence farming
B. cash crops
C. indentured servitude
D. cottage industries
39. _____ is the current President of the United States.
A. Joseph Biden
B. Kamala Harris
C. Chuck Schumer
D. Donald Trump
40. The economic theory of _____ stated that a nation's wealth is created by beneficial trade based on exploiting the resources of its colonies.
A. mercantilism
B. capitalism
C. free trade
D. command economies

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ SOCIAL STUDIES
INVITATIONAL TEST – GRADES 5 & 6**

Answer Key

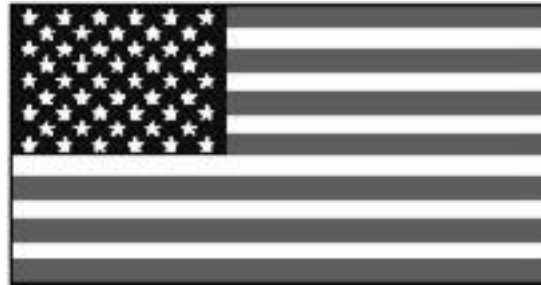
- | | |
|-------|-------|
| 1. A | 21. D |
| 2. D | 22. C |
| 3. C | 23. B |
| 4. D | 24. C |
| 5. B | 25. A |
| 6. D | 26. D |
| 7. D | 27. B |
| 8. D | 28. C |
| 9. C | 29. B |
| 10. C | 30. C |
| 11. A | 31. B |
| 12. D | 32. C |
| 13. C | 33. A |
| 14. B | 34. A |
| 15. D | 35. D |
| 16. A | 36. B |
| 17. B | 37. B |
| 18. C | 38. D |
| 19. C | 39. A |
| 20. D | 40. A |

FALL/WINTER DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



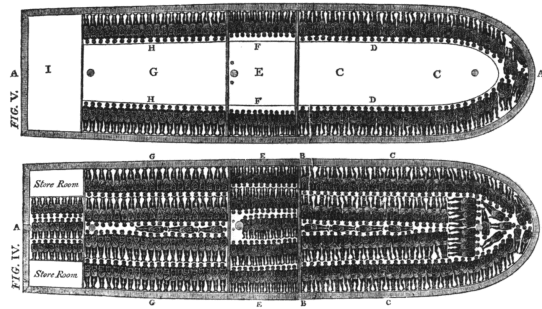
Social Studies

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ SOCIAL STUDIES
FALL/WINTER DISTRICT TEST – GRADES 5 & 6**

1. Without the ability of colonists to have _____, it would have been difficult for a free enterprise system to take root.
A. religious freedom
B. freedom of the press
C. representative government
D. private property
2. The city of New Orleans was founded by the _____ in 1718 and became a major port at the mouth of the Mississippi River.
A. Spanish
B. French
C. British
D. Swiss



3. The Trans-Atlantic slave trade enslaved Africans and forced them to migrate mainly to _____.
A. British North America
B. the Caribbean and Brazil
C. French North America
D. Europe
4. The plantation system that used large amounts of enslaved people to operate, generally existed in the _____ region of British colonies.
A. mountainous
B. southern
C. western
D. driest

Types of Governments

- Theocracy
- Oligarchy
- Absolute Monarchy

5. All of the items listed above are examples of _____ governments.
A. unlimited
B. representative
C. communist
D. limited
6. Taking care of yourself and accepting responsibility for your actions are examples of _____.
A. political rights
B. personal responsibilities
C. economic responsibilities
D. civic rights

7. The _____ was adopted in 1639 and became the first written constitution in the North American colonies.
A. Fundamental Orders of Connecticut
B. Mayflower Compact
C. Articles of Confederation
D. Bill of Rights
8. _____ was an outspoken supporter of religious freedom in the Massachusetts Bay colony that was banished due to her beliefs. She fled to the colony of Rhode Island.
A. Abigail Adams
B. Anne Hutchinson
C. Rebecca Nurse
D. Anne Bradstreet
9. René Robert Cavelier, Sieur de la Salle was a _____ explorer that tried to establish a colony along the Mississippi River, but actually landed at Matagorda.
A. Spanish
B. French
C. British
D. Portuguese
10. Colonies such as _____, Rhode Island, and New Hampshire mainly focused on economic activities such as ship building and trade.
A. Massachusetts
B. Pennsylvania
C. South Carolina
D. Virginia
11. In a _____ country, the government owns most industries and businesses and there is little to no private ownership.
A. communist
B. capitalist
C. free enterprise
D. theocratic
- “In witness whereof we have hereunto subscribed our names at _____ the 11 of November, the year of the reign of our sovereign Lord....”*
12. The above excerpt from the Mayflower Compact states that the document was signed at _____.
A. Jamestown
B. Cape Cod
C. Roanoke
D. Boston
13. The _____ government became more interested in creating settlements in Texas to keep the French from establishing control of the region.
A. British
B. Spanish
C. Dutch
D. Mexican
14. The Charter of Massachusetts specifically calls for the creation of the offices of _____.
A. Mayor and City Manager
B. President and Vice President
C. Senate Leader and Speaker
D. Governor and Deputy Governor
15. _____ were colonial military settlements used by the Spanish to defend the territory they claimed from Native populations.
A. Missions
B. Caudillos
C. Presidios
D. Rancheros

16. The Charter of Massachusetts Bay was authorized by the King of England, _____.
A. James II
B. Henry VIII
C. Charles I
D. Richard I
17. Qatar, Saudi Arabia, and Iran are all examples of unlimited governments in _____.
A. Southwest Asia
B. East Asia
C. North Africa
D. Western Europe
18. The current Chief Justice of the U.S. Supreme Court is _____.
A. John Roberts
B. Sonia Sotomayor
C. Elena Kagan
D. Ketanji Brown Jackson
19. The Virginia House of Burgesses held its first session as a representative part of the colonial government in _____.
A. 1631
B. 1619
C. 1585
D. 1607
20. According to *The Instructions for the Virginia Company*, the chief way to prosper and have success was _____.
A. to drill troops regularly and intensely
B. to all work together for the good of the country
C. to work in the fields every day without fail
D. to find gold or other precious metals
21. A socialist economic system generally provides a wide variety of services to its citizens, but also features _____ than a free enterprise system.
A. higher taxes
B. less employment
C. less exchanging of goods
D. more private property
22. The Mayflower Compact states that the *Mayflower* was sent in order to plant the first colony in _____.
A. Northern Virginia
B. North America
C. Massachusetts
D. New England
23. Nearly all _____ nations have featured limited governments for decades.
A. East Asian
B. Southwest Asian
C. Western European
D. Southeast Asian
24. The Minority Leader of the House of Representatives is currently, _____.
A. Hakeem Jefferies
B. Nancy Pelosi
C. Mike Johnson
D. Kevin McCarthy
25. A(n) _____ has elected leaders that act on behalf of the citizens.
A. unlimited government
B. representative government
C. coalition government
D. totalitarian government

26. When _____ in short supply in an economy, it can result in migration, outsourcing, and even enslavement.
- | | |
|--------------------------|----------------------|
| A. natural resources are | C. capital is |
| B. labor is | D. entrepreneurs are |
27. Respecting the rights of others, being informed about needs of the community, and staying informed about the actions of elected leaders are all examples of _____.
- | | |
|------------------------------|----------------------------------|
| A. personal responsibilities | C. civic responsibilities |
| B. economic responsibilities | D. governmental responsibilities |
28. *The Instructions for the Virginia Company* required that carpenters and skilled builders first construct a _____ before any private structures.
- | | |
|---------------|-------------|
| A. storehouse | C. school |
| B. church | D. garrison |
29. Fishing was most essential to the economy of the _____ British colonies in North America.
- | | |
|-----------------|-----------------|
| A. southern | C. midwestern |
| B. southeastern | D. northeastern |
30. The will of the majority and a focus on the good of the settlement were principles of the _____ written in 1620.
- | |
|--------------------------------------|
| A. Mayflower Compact |
| B. English Bill of Rights |
| C. Albany Plan of Union |
| D. Fundamental Orders of Connecticut |
- *Had many settlements in what is now Canada*
 - *Sent Jesuit Missionaries to convert Natives*
 - *Used the St. Lawrence River to found settlements*
 - *Focused on the fur and pelt trade*
31. All of the above items describe _____ colonies in North America.
- | | |
|------------|---------------|
| A. Spanish | C. French |
| B. Dutch | D. Portuguese |
32. The amounts of entrepreneurs and foreign capital were limited in _____ prior to the 1990s, which limited the ability of its economy to grow.
- | | |
|-----------|-----------|
| A. Russia | C. Canada |
| B. China | D. Japan |
33. The Maryland Act of Toleration was the first law in the North American colonies requiring _____.
- | | |
|---|-------------------------------------|
| A. all men be allowed to vote | C. the colonial governor be elected |
| B. religious freedom for all Christians | D. freedom of the press |

34. All of the following are major characteristics of the free enterprise system in the United States **EXCEPT** for _____.
A. economic freedom
B. voluntary exchange of goods
C. equal wealth distribution
D. private property
35. A country that has a limited supply of natural resources may develop a(n) _____ which is an economy based almost entirely on a single crop.
A. monoculture
B. trade deficit
C. service economy
D. import policy
36. The free enterprise economy of the North American colonies under British rule was limited due to government restrictions on _____.
A. employment
B. agricultural
C. education
D. trade
37. On June 19, 1865, enslaved people in Texas were informed about the Emancipation Proclamation when General Gordon Granger announced the end of slavery and the Civil War in _____.
A. Nacogdoches
B. Austin
C. Galveston
D. San Antonio
38. The Massachusetts Bay Colony established in _____ was a charter colony.
A. 1629
B. 1607
C. 1620
D. 1638



39. _____ is the Majority Leader of the United States Senate.
A. Mike Johnson
B. Mitch McConnell
C. Chuck Schumer
D. Hakeem Jefferies
40. All of the following were mentioned as the three main types of jobs assigned by *The Instructions for the Virginia Company* **EXCEPT** for _____?
A. building fortifications
B. making treaties with locals
C. preparing the land for farming
D. exploring the surrounding area

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ SOCIAL STUDIES
FALL/WINTER DISTRICT TEST —GRADES 5 & 6**

Answer Key

- | | |
|-------|-------|
| 1. D | 21. A |
| 2. B | 22. A |
| 3. B | 23. C |
| 4. B | 24. A |
| 5. A | 25. B |
| 6. B | 26. B |
| 7. A | 27. C |
| 8. B | 28. A |
| 9. B | 29. D |
| 10. A | 30. A |
| 11. A | 31. C |
| 12. B | 32. A |
| 13. B | 33. B |
| 14. D | 34. C |
| 15. C | 35. A |
| 16. C | 36. D |
| 17. A | 37. C |
| 18. A | 38. A |
| 19. B | 39. C |
| 20. B | 40. B |

SPRING DISTRICT 2024-2025

A+ ACADEMICS



University Interscholastic League



Social Studies

grades 5 & 6

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ SOCIAL STUDIES
SPRING DISTRICT TEST – GRADES 5 & 6**

1. Leaders of the Texas independence movement first officially announced their separation from Mexico at _____.
A. Washington-on-the-Brazos
B. Austin
C. The Alamo
D. San Jacinto
2. The desire for financial gain that acts as an incentive in the free enterprise system is known as _____.
A. exploitation
B. opportunity cost
C. profit motive
D. entrepreneurship
3. The first permanent European settlement in, what is now, the United States was _____. It was founded by Spain in 1565.
A. St. Augustine
B. New Orleans
C. Roanoke
D. Quebec

**Influence of the Spanish Government
in Colonial Texas**

- Roman Catholicism
- Representative government
- Central town squares
- Administration by appointed leaders

4. All of the following examples in the diagram above belong in the box **EXCEPT** for _____.
A. Roman Catholicism
B. Representative government
C. Central town squares
D. Administration by appointed leaders
5. _____ is an essential characteristic of the free enterprise economic system. It is a transaction where consumers and producers trade goods and services freely.
A. Profit motive
B. Investment opportunity
C. Technological innovation
D. Voluntary exchange
6. In 1608, Pierre de Mons and Samuel de Champlain founded the first permanent _____ settlement in the St. Lawrence Valley at Quebec City.
A. British
B. French
C. Dutch
D. Swiss

"Above all things Do not advertise _____ that the Country people may know it if they Perceive that they are but Common men and that with the Loss of many of theirs they Deminish any part of Yours they will make Adventures upon You..."

7. The above excerpt from *The Instructions for the Virginia Company* can best be completed by that statement that Natives should not be allowed to know _____.
A. when members of the settlement have been killed or are sick
B. where the grain or harvest is stored
C. what other countries have established settlements
D. how the cannons or firearms work or are repaired
8. Francisco Coronado was a Spanish conquistador that explored the _____ and searched for the Seven Cities of Gold.
A. Mississippi River
B. Florida coast
C. Missouri River
D. Palo Duro Canyon
9. The factor of production most affected by drought and a lack of readily available water sources is/are _____.
A. capital
B. natural resources
C. entrepreneurship
D. technology



10. William Penn was a devout member of the _____ faith. He helped settle the colony of Pennsylvania which allowed for freedom of worship.
A. Catholic
B. Mormon
C. Quaker
D. Puritan
11. Shipbuilding was most significant in the economy of the _____ colonies.
A. Middle
B. Southern
C. French
D. New England
12. All of the following were motivations for the Spanish to explore and settle Texas **EXCEPT** for _____.
A. spreading Christianity
B. finding precious metals
C. expanding the influence of the King
D. furthering religious freedom

13. When _____ is/are in short supply in an economy it can result in a lack of development and the need for foreign involvement.
- A. labor
B. natural resources
C. entrepreneurship
D. capital
14. The _____ was the dangerous and often deadly journey by enslaved Africans from West Africa to the West Indies where they were to be sold.
- A. triangular trade
B. mercantile system
C. middle passage
D. trail of tears
15. The Mayflower Compact was needed to create a new agreement for governing because the passenger's original leaders' authority was meant for a settlement in _____.
- A. Florida
B. Virginia
C. New England
D. Canada

- Right to vote
- Speak freely
- Protest peacefully

16. All the items listed above are best described as examples of _____.
- A. political rights
B. economic rights
C. personal rights
D. personal responsibilities
17. _____ is the factor of production that is readily available in several Southwest Asian economies due to the sale of oil.
- A. Capital
B. Natural resources
C. Labor
D. Entrepreneurship
18. The settlement site recommended by *The Instructions for the Virginia Company* needed to be not too moist and also not too _____.
- A. mountainous
B. dry
C. covered by woods
D. near a lake
19. All of the following were listed as reasons needed for the creation of the Mayflower Compact **EXCEPT** for the need _____?
- A. to enact ordinances
B. to raise an army
C. to frame laws
D. to constitute officers
20. The ability to own property, change employment, or join a union are examples of _____ in a society with a representative government.
- A. political rights
B. economic rights
C. personal rights
D. voting rights



21. As of 2024, _____ served as the Attorney General of the United States.
A. Tom Vilsack
B. Merrick Garland
C. Christopher Wray
D. Antony Blinken
22. According to the Charter, future governors and other officers of the Massachusetts Bay Company _____.
A. were appointed by the king
B. inherited their positions
C. would be elected by members of the company
D. were appointed for life
23. A free enterprise system requires competition in order to thrive, but the British government tried to limit that in its colonies by using a _____ system.
A. capitalist
B. command
C. mercantilist
D. free trade
24. Free speech, right to property, and the ability to freely exercise a religion are all key components of societies with _____ governments.
A. unlimited
B. representative
C. traditional
D. communist
25. As of 2024, _____ was the Secretary of State for the United States.
A. Antony Blinken
B. Lloyd Austin
C. Hakeem Jefferies
D. Chuck Schumer
26. The first Governor of the Massachusetts Bay Company was _____.
A. Matthew Cradock
B. William Bradford
C. John Smith
D. Jonathan Edwards
27. Crops such as indigo, rice, and sugar were mainly grown in the _____ colonies.
A. western
B. northern
C. middle
D. southern

Limited Governments

- Australia
- South Korea
- Philippines

28. Another example of a limited government would be _____.
A. New Zealand
B. Cuba
C. Syria
D. North Korea
29. As of 2024, the United States Senate Majority Leader was _____.
A. Rand Paul
B. Ted Cruz
C. John Cornyn
D. Chuck Schumer
30. All of the following are examples of unlimited government systems **EXCEPT** for _____.
A. dictatorship
B. totalitarianism
C. single-party rule
D. republic
31. The _____ became an example of representative government that was imitated by many other British colonies as more were established in North America.
A. House of Lords
B. Continental Congress
C. New York State Assembly
D. Virginia House of Burgesses
32. The first English settlement attempted in North America was founded in 1585 at _____ by Sir Walter Raleigh.
A. Jamestown
B. Plymouth
C. Roanoke Island
D. Popham
33. The Mayflower Compact states that the signers wanted to combine themselves into a _____ for a better chance at preservation and success in their goals.
A. "house of Congress"
B. "civil body politick"
C. "more perfect Union"
D. "a humble religion"
34. Enslaved people in American colonies were mainly used in the production of _____.
A. manufactured goods
B. cotton and plantation crops
C. ships and trading vessels
D. cottage industries
35. The leadership positions created by The Massachusetts Bay Charter were able to create laws and rules for the colony as long as they were _____.
A. not in opposition to English laws
B. fair to all people of all backgrounds
C. voted on by all inhabitants
D. based on the Old Testament
36. China, Laos, and Vietnam are all examples of _____.
A. unlimited governments
B. limited government
C. market economies
D. mixed-market economies

37. An agreement among people in a group to cooperate for the benefits of the community is known as a _____.
A. constitution
B. bill of rights
C. social contract
D. charter
38. One of the main reasons that the _____ tried to establish colonies in North and South America was to spread the influence of Catholicism.
A. British
B. Spanish
C. French
D. Germans
39. An example of the _____ spirit of colonists in North America was their development of cottage industries to produce goods and start businesses.
A. laissez-faire
B. entrepreneurial
C. mercantilist
D. patriotic
40. Wages in the United States under a free enterprise system are generally determined by _____.
A. the availability of natural resources
B. what society values
C. federal legislation
D. state law

**UNIVERSITY INTERSCHOLASTIC LEAGUE
2024-25 A+ SOCIAL STUDIES
SPRING DISTRICT TEST – GRADES 5 & 6**

Answer Key

- | | |
|-------|-------|
| 1. A | 21. B |
| 2. C | 22. C |
| 3. A | 23. C |
| 4. B | 24. B |
| 5. D | 25. A |
| 6. B | 26. A |
| 7. A | 27. D |
| 8. D | 28. A |
| 9. B | 29. D |
| 10. C | 30. D |
| 11. D | 31. D |
| 12. D | 32. C |
| 13. D | 33. B |
| 14. C | 34. B |
| 15. B | 35. A |
| 16. A | 36. A |
| 17. A | 37. C |
| 18. C | 38. B |
| 19. B | 39. B |
| 20. B | 40. B |



Storytelling

EVALUATION SHEET

INSTRUCTIONS

Please review the instructions for evaluating the performances of the storytelling contestants. The following criteria are of equal importance to evaluating contestants. Terminology used is only intended to help the judge identify criteria for determining a winner. Please make your comments using language understandable to the contestant. Students and instructors appreciate constructive narrative comments. Please do not confer with other judges before ranking students. Judges' decisions are an individual responsibility.

Speaker Number _____

Speaker Name _____

Round ☐ Prelims

Section _____

☐ Finals

- | | | |
|-----|----|---|
| Yes | No | Did the contestant communicate effectively with the audience? |
| Yes | No | Did the contestant command attention? |
| Yes | No | Did the contestant tell the story with ease? |
| Yes | No | Did the contestant exhibit enthusiasm? |
| Yes | No | Did the contestant utilize facial expressions, vocal variety and characterization? |
| Yes | No | Did the contestant make good eye contact? |
| Yes | No | Did the contestant use good posture? |
| Yes | No | Did the contestant speak clearly? |
| Yes | No | Did the contestant use gestures effectively? |

CONSTRUCTIVE COMMENTS FOR THE CONTESTANT:

Judge's signature _____



Storytelling Contest

Invitational Meet 2024-25

“Career Day”

Grades 2 and 3

by Sherri Maret

We started career day last week at school. I got to hear about what it was like to be a firefighter, police officer, mail person, lawyer, librarian, and construction worker.

Our teacher took us to the library so we could learn about more careers. I was disappointed because there weren't any books on the job I wanted.

I asked the librarian, “Are these all the books you have?”

She said there was information on the computer, and she showed me how to search for my career.

Nothing came up.

“I can't find anything about my career,” I told my teacher.

“What career is it?” she asked.

“I want to be a magician,” I told her.

She looked a little surprised. That's probably because I'm pretty quiet and shy.

“Really? Interesting! I think the librarian and I can find something for you,” my teacher said.

The next day there were some papers on my desk. It was a couple of magazine articles about being a magician. Yes! This was going to be very helpful.

In two weeks, we had to give a short presentation about what we wanted to be when we grew up. It was kind of like a show and tell but about a job we wanted to do. What my teacher didn't know was that I actually knew a magician.

"Aunt Maggie, I am doing a presentation on being a magician. I wondered if you could help?" I asked her.

"Really! That's awesome! I'd be happy to help!" she said giving me a high five.

See, Aunt Maggie is a magician. She is also a doctor. She learned magic to help little kids when they were scared about getting a shot or anything like that. When my cousin fell off his bike and broke his collar bone, Aunt Maggie was there doing magic for him.

Aunt Maggie said I could come over to her house so she could help me. She is the best aunt in the world!

When I was little, she would do magic tricks for me. When I told her I wanted to learn magic, she began to teach me how to do simple magic tricks. It was so much fun to do!

Aunt Maggie cooked us some dinner while I worked on a poster. She said, "So you know there are rules about being a magician, right?" I nodded.

"Yes, don't do a magic trick and then show people how it's done," I replied.

"That's right," she replied. "What else?"

“Well, if someone really wants to be a magician and does a lot of homework on it like I did, then you can share some simple tricks with them because they are a magician in training,” I told her.

“Okay, good,” she nodded. She finished making spaghetti and we sat down to eat.

“So what else do you need to do for this assignment?” Aunt Maggie asked.

“First, I have to tell my class what I want to be when I grow up. Then I have to describe the job. Then I have to share a few interesting facts about it. I also have to have my poster with some information on it,” I explained.

“Have you thought about those interesting facts yet?” she asked me.

“Well, I was going to talk about you being a doctor and that you learned magic to make little kids feel better when they were sick or hurt,” I told her. “I also wanted to talk about Houdini.”

“I doubt anyone knows much about Houdini in your age group,” she told me.

I said, “I did a little research on the great magicians so I thought I would talk about him.”

She told me that I was on the right track. Then I explained that I would do a few magic tricks.

“What a great idea,” she said.

Then it was time to do my presentation.

“Break a leg,” Aunt Maggie said the night before I had to do my presentation. “How do you feel about doing it? I know you get a little nervous sometimes.”

“When I put on my cape and top hat, I don’t feel as scared,” I told her.

She gave me a big hug and wished me luck.

The next day I was the last one to give the presentation. After seeing the other ones, I felt pretty good. I’m not the only kid who gets nervous when talking to a group all by myself. When I stood in front of the class, I felt like I was someone else. It was a little like magic.

I started with saying, ‘Abracadabra!’

That got a laugh. I felt better already!

I went through the information and showed my poster. I did a few magic tricks, and the class seemed amazed.

After my little tricks, I thought it would be funny to tell them I would do my final trick.

“Now, this magician will disappear! Abracadabra” Then I did by removing my cape and hat and sitting back at my desk.

My teacher said it was excellent and was the most fun presentation she had ever seen.



Storytelling Contest

Invitational Meet 2024-25

“Career Day”

Grades 2 and 3

by Sherri Maret

Directions to Contest Directors: Give a copy of this sheet to each judge before the contest begins.

Directions to Judges: Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. In the narrator’s classroom, it is career day. When the narrator arrives at the library to research careers, they do not see books about becoming a magician.
2. The narrator receives information on becoming a magician from their teacher and the librarian. The narrator must prepare a presentation on their career choice for their class.
3. The narrator’s Aunt Maggie is both a doctor and a magician. She learned magic to help her patients feel more comfortable. Aunt Maggie teaches the narrator a few tricks for their presentation.
4. The narrator is nervous for the presentation, but after putting on a cape and top hat and saying “abracadabra!”, they feel more confident.
5. The narrator’s teacher says it was the most fun presentation she had ever seen.



Storytelling Contest

Invitational Meet 2024-25

“Summer at the Lake”

Grades 2 and 3

by Sherri Maret

When school started, my teacher asked everyone in the class to write about something that had happened during the summer.

She said she wanted it to be a story. It could be funny or maybe something that happened when we learned something new. I thought about my time at the lake with my family.

Summer started and my mom and dad said we were going to a cabin and having a family reunion there. I was so excited! All my cousins would be there. I have eleven of them. Three are babies, five of us are in elementary school, and the rest are in junior high or high school.

“All my cousins will be there?” I asked.

“All of them,” mom said and smiled at me because she knew this was a big deal.

Our whole family had never been together at one time.

“Where will everyone sleep?” I asked.

“There is a bunkhouse for the older kids including you. The younger kiddos will be with their moms and dads,” she explained. “Grandma and Grandpa will be there too.”

Wow, this is going to be awesome! Then dad said something that made my heart pound.

“We need to get to the pool so we can make sure you’re comfortable in the lake,” he said.

Oh NO! You see, I was a little afraid of swimming. That’s not true. I am a lot afraid of swimming.

I remember falling into the pool when I was four and I sank. My dad grabbed me and pulled me up. It was scary!

That night I didn’t sleep very well. I decided I didn’t want to go.

The next morning my mom and dad talked about when my swim lessons would start.

“I don’t feel good,” I told them.

My mom said that she knew I wasn’t too comfortable in the pool, but she wanted to make sure I knew the basics.

Dad said that if I didn’t want to go into the lake, that was okay. He did want me to try the lessons and know how to float if I ever fell into the water.

I know that makes sense, but I was still afraid.

On the first day of swim lessons, I saw a kid I knew from school. I was surprised he didn’t like the water either.

Then our swim teacher showed up.

“Aloha! I’m Koa. I grew up in beautiful Hawaii. I was born swimming,” he said. We all laughed. He was funny.

He went through some rules and then told us to get into the shallow end and hang on to the side of the pool. He kept me laughing which made me forget that I didn't like being in water.

He showed us how to put our faces under water and blow bubbles. We learned to float on our backs and stomachs. The lesson ended so quickly.

"OK! Great job everyone! I think we may have some future Olympic swimmers in this class," he said. That made us all laugh again.

My mom read a book during the lesson and watched me some of the time. She smiled and waved when she saw that Koa had said we could go rinse off in the showers.

"That wasn't so bad, was it?" she asked.

"No. Koa is funny," I said as I wrapped my towel around me.

I didn't love the pool but now I didn't hate it either. I think Koa being funny helped a lot.

The next lesson was about the same.

"Okay. Everyone hold on to the kick board and see how fast you can get to the other side," Koa said and then blew the whistle.

We all kicked like crazy, and I didn't come in last.

"Nice work, everyone! Now let's do some review drills," Koa called.

At the end of the lesson he said, "I think tomorrow is a good day to do the first jumps into the deep end."

I got a funny feeling in my stomach, but it didn't hurt too much. Maybe I could do this.

Koa knew that some of us were a little nervous, so he showed us some of his amazing dives off the high board. He told us, "I've got to be honest. The first jump off the high diving board was scary for me. Now I can't imagine being scared doing something I love."

Everyone did great in the deep end. The rest of the lessons were fun, and I decided I was sad that they were ending.

Finally! The time had come to pack up to go to the lake. My family was one of the first ones there.

"Aloha!" I said to my grandparents and gave them both hugs.

They showed us where we were sleeping. They had been swimming and asked us to come down to the dock.

"You don't have to change unless you want to," my grandmother said. She knew how I had felt about swimming.

I surprised them when I did a cannonball off the dock! I am so glad that I learned to swim! I'm telling you this because I learned that if you're afraid of something, it is best to face that fear. If I can do it, so can you.



Storytelling Contest

Invitational Meet 2024-25

“Summer at the Lake”

Grades 2 and 3

by Sherri Maret

Directions to Contest Directors: Give a copy of this sheet to each judge before the contest begins.

Directions to Judges: Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The narrator must write a story about their summer. They decide to write about going to the lake with their family.
2. The narrator and their family, including their eleven cousins, are going to a cabin on the lake and having a family reunion.
3. The narrator’s parents want the narrator to learn to swim so that they can have fun swimming in the lake. The narrator is nervous and scared to be going in the water after sinking in a pool as a child.
4. The narrator takes swim lessons with Koa, who is Hawaiian. Koa is funny and makes the narrator more comfortable swimming, diving, and being around the water.
5. When the narrator arrives at the lake, they do a cannonball off the dock to show off their newly learned swimming and diving skills. The narrator is happy to have overcome their fear of swimming.



Storytelling Contest

Fall/Winter District 2024-25

“Whoppers”

Grades 2 and 3

by Sherri Maret

Have you ever had a friend or relative who was always making up wild stories?

I remember when my teacher read the story, The Boy Who Cried Wolf, and that is a little like a cousin of mine.

Last summer, my cousin, J.J. got a little too crazy telling made-up stories pretending they were real. Some of my friends at school said that he was telling lies.

Here's what happened last summer.

Some of my friends and I went to a fun day camp. J.J. was going too.

My mom dropped me off and I had my lunch and backpack. We were told to bring our swim stuff every day. There wasn't a pool. We were told there would be water sports. I was super excited.

J.J. and I are the same age, so we were going to be in the same group.

“Campers!” yelled one of the leaders. “Look around and find your leader. You are grouped by age. We all have a room for each group but when we are outside we may be together again.”

I saw my group and there was J.J. I said hi and asked how his summer was going.

“Okay. I wish space camp wasn't cancelled. I would rather be there,” he told me.

Now I knew that this was made up and you want to know why. He is always saying this kind of thing. I just rolled my eyes and looked around at the other campers.

Our leader got us in a circle, and we had to say our name and tell a little bit about ourselves. J.J. again said he was supposed to go to space camp. No one knew him so they believed him. They were excited to learn more about it.

We went to a room and put our backpacks and lunches away. The leader said we were going outside for the morning and then come in when it got hot.

“First up is some soccer fun,” the leader told us. She said to line up and do a few drills. After that we got together with another class and split into teams. Our leader asked for two players to be the goalies. J.J. volunteered because he wasn’t good at dribbling.

We played and every shot on our goal got past J.J. His excuses were:

“Sorry. The sun is so bright I can’t see very well. I should have brought my sunglasses.”

“Oops! I was distracted because I saw an eagle fly by.”

“I would have caught that one, but I didn’t see that kick coming because Casey was blocking my view.”

“I thought I saw something shiny in the sky and thought it might be a shuttle or something.”

Pretty soon the team realized J.J. wasn’t fun to have on the team.

We took a break for drinks and a snack. Then it was time for water sports, so we changed into swimsuits.

We could choose different things, and I chose to get a giant squirter and goggles and have some fun.

I told J.J., “You need to quit saying crazy stuff. No one wants to be around you because of it.”

After I told him that, I saw that he was alone a lot of the time.

We went inside and ate lunch. After that we played board games. J.J. talked about what he would have been doing at space camp. The other kids ignored him.

The rest of his day didn't look good to me.

The next morning my mom picked up J.J. to go to camp. We talked a little before we got dropped off.

"Do you like the camp?" I asked him.

"Not really. No one likes me," he said.

"Maybe if you would quit telling those crazy stories it would be better. No one likes it. Just try it. I've told you this before, but you ignored me," I told him.

Our leader told us we were mixing things up again and we were doing groups of four. We were doing timed obstacle courses.

The team with J.J. ended up doing the best.

"Hey! You did great!" I told him.

"My team is the best team! YES! We were on fire!" he told me with a big smile.

"Did you tell any crazy stories to the others on your team?" I asked.

"No. I was too busy having fun and winning," he replied.

I told him, "My mom always has said that the best person to be is your true self."

J.J. replied, "I think she is right. Also, thanks for helping me. I think I'll have more fun here being the true me."

And he did.



Storytelling Contest

Fall/Winter District 2024-25

“Whoppers”

Grades 2 and 3

by Sherri Maret

Directions to Contest Directors: Give a copy of this sheet to each judge before the contest begins.

Directions to Judges: Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The narrator has a cousin named J.J. who tells made-up stories but pretends they're real.
2. J.J. and the narrator go to summer camp together. J.J. tells the narrator he wishes he was at space camp instead. The narrator knows that this is another made-up story.
3. J.J. tells the other campers about space camp. The kids believe him and want to be friends, but then J.J. makes excuses for playing soccer poorly, all of which are made-up stories. The campers get tired of J.J. lying.
4. The narrator tells J.J. to stop saying made-up stuff if he wants people to like him.
5. J.J. plays with the other campers and doesn't tell any stories, he just has fun and plays along. His team wins at an obstacle course and J.J. learns to just be himself.



Storytelling Contest

Fall/Winter District 2024-25

“Flat Tire”

Grades 2 and 3

by Sherri Maret

When my friend knocked on my door to see if I could go out and play, she had bad news for me.

“When I got my bike out to ride, I saw that your tire is flat,” Terri said.

“I need to check my bike,” I called to my mom.

I followed Terri to the bike rack. Yep, I had a flat.

“Just my luck. We are rushing to get packed up for our move to the new house.”

“When is the truck coming?” asked Terri. I told her tomorrow we were packing the truck to move all the big stuff.

“I’m going to miss you,” Terri told me. “What’s your house like?”

“Since I’m not changing schools, we’ll still see each other,” I said.

I described my house which has a big yard and was only a couple of blocks from our school.

“We’ll still see each other. I’m sure our moms won’t mind getting us together over the summer.”

Terri said, “It sounds really nice.”

“Dad’s going to put up a tire swing for me,” I said.

I was so excited that my room was going to be so much bigger than the one I had.

Then Terri said, “You’ve had that bike for a while. Isn’t it too small for you?”

I had been thinking the same thing. My grandmother told me I was growing like a weed and then took me to get some more pants.

I really wanted a bike for my birthday but that was a long time to wait. Summer wouldn’t be great without a bike to ride. It also wasn’t easy to pedal since I grew so much.

“I need to go finish packing. See you later,” I said.

While I walked back to our apartment, I wondered if summer was going to be awful. My bike had a flat and was too small. Then I had a terrible thought. What if there weren’t any kids in my neighborhood? I became a little worried.

Terri’s mom and my mom wouldn’t be happy driving back and forth so we could play.

I walked in the door and my mom asked, “What’s up with your bike?”

I told her about the flat and she said we could work to get it fixed after the move. I sighed but was okay with that. I went to finish packing my clothes.

Mom called out, “Ready for lunch?” I was, so we got out paper plates and made sandwiches.

“What do you think about having a pizza move-in party tomorrow night?” she asked. “Then we will work on unpacking the days following.” I thought that was a great idea.

The next day was crazy!

My dad asked, “What do you think of your room?”

“It’s awesome!” He smiled and got back to work.

The movers put in the furniture, and I helped move boxes to the rooms where they belonged.

“Your bike is in the garage. We’ll get it fixed soon,” my father promised.

I still had been thinking about a new bike. That night we had pizza and a movie. My little brother fell asleep before the ending. We were all pretty tired.

The next few days we got a lot of stuff unpacked. I kept my eyes open for kids on my street but didn’t see any. I was beginning to feel worried that there were just a bunch of old people on my street.

Dad went to the store to get a few things. He surprised me when he handed me a new tube for my bike tire.

“Thanks!” That evening we fixed it in under an hour.

On Saturday I wanted a break. “Mom! Can I explore a little while?”

Mom said, “Why don’t we all go? I saw a couple of garage sales so maybe we can meet our neighbors.”

I had a little money just in case I found something good to buy. My little brother was happy to explore, too.

Then I saw someone I knew!

“Hey Marco!” I waved at a boy who was in a grade older than me. He lived at the end of the block and had a lot of stuff out for a garage sale.

He seemed happy that I was his new neighbor. At one time we were on the same soccer team. We talked as I looked at what they were selling. One thing was a bike that would be perfect for me!

“How much is this bike?” I asked Marco and his mom. She told me but it was a little too much.

Marco’s mom asked, “Do you like it?”

I nodded but told her I didn’t have enough money. I also told her I had a bike, but it was too small.

Marco showed me his soccer goal set up in his backyard. My summer was looking better now!

I saw my mom and Marco’s mom talking. My mom called me to come over. Marco’s mom asked, “Would you want to trade your bike for this one? Instead of selling Marco’s bike, we’ll just sell yours.”

“That would be GREAT!” I was so surprised and happy. Marco walked with me and my mom to our house to get my bike. I tested my new bike and it felt just right.

After Marco took my bike, waved, and left, my mom said, “That was really nice of Louisa and Marco to do. Why don’t we invite them over for a spaghetti dinner once we get settled?”

I agreed. “Mom, Marco said he needed to work on their garden for his mom. Would it be okay to go and help him? Then he can play sooner.” My mom thought that was a great idea.

I was glad my summer looked like it was going to be much more fun than I had thought!



Storytelling Contest

Fall/Winter District 2024-25

“Flat Tire”

Grades 2 and 3

by Sherri Maret

Directions to Contest Directors: Give a copy of this sheet to each judge before the contest begins.

Directions to Judges: Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The narrator is going to ride bikes with their friend Terri. Terri points out that their bike tire is flat and that the bike is too small for the narrator.
2. The narrator is moving tomorrow and doesn't have time to fix the flat, so they cannot ride with Terri. They are sad about not being able to ride for a while.
3. After moving into their new house, the narrator is worried that there won't be any kids in their new neighborhood.
4. The narrator decides to explore their new neighborhood and visit some garage sales. The narrator runs into a friend named Marco who used to play on the same soccer team.
5. Marco's mother Louisa is selling a bike and offers to trade the narrator for their bike, since the new bike is a better size. The narrator is very happy to have a new bike and to have a friend in the neighborhood.



Storytelling Contest

Spring District 2024-25

“Water Park”

Grades 2 and 3

by Kathryn Gonzales

It was one of the hottest summers the kids had experienced, and the Johnson family was ready for a day out of fun.

Mom, Dad, Lily, and Eric were heading to the biggest water park in the area. The kids had been looking forward to this day for weeks and could barely sit still on the ride over.

As they pulled into the parking lot, Eric called out with excitement, “Look at the slides!” He pointed to the large structures towering over the park walls.

Lily bounced in her seat, exclaiming, “I can’t wait for the lazy river and the wave pool!”

Once parked, they grabbed their bags and set off towards the entrance. They were greeted by the sounds of splashing water and laughter as they walked through the gates and settled at their table.

“Let’s start with the big slide!” Eric said, tugging at his dad’s hand.

Dad chuckled, “Alright buddy. Let’s do it.”

The Johnsons made their way to the elevated water slide. Lily and Eric raced ahead with their bare feet slapping against the wet pavement. They climbed the stairs, hearts pounding with anticipation, as they climbed higher and higher.

Once at the top, it was finally their turn.

“Ready. Set. Go!” Dad yelled, and they were off, sliding down and screaming with delight with every twist and turn before reaching the pool below.

“Again!” Eric shouted, already running back to the stairs.

“How about we try something different first?” Mom suggested. “What about the lazy river?”

With the rest of the family in agreement they headed to the lazy river. After hopping into their inner tubes, they let the gentle current carry them along.

Lily and Eric splashed each other playfully, while mom and dad floated side by side holding hands and relaxing in the warm sun.

“This is so nice,” Mom said, closing her eyes and coasting along.

After a relaxing float, the siblings were ready for more action.

“I think it’s time for the wave pool!” Lily said, her eyes wide with excitement. They rushed to the pool just in time for the next set of waves to start.

The water began to rise and fall, creating captivating waves for everyone to jump and ride.

Eric and Lily held hands, laughing as they tried to jump over each wave.

“Watch out!” Dad shouted playfully as a big wave knocked him off his feet.

Mom giggled and splashed him. “You’re such a big kid,” she teased.

Once they had their fill of the wave pool, the Johnsons decided it was time for lunch. They headed back to their table that was covered by a giant umbrella and unpacked their picnic.

Sandwiches, fruit, chips and cookies were devoured quickly as they recapped their favorite parts of the day so far.

“I loved the big slide, I can’t wait to do it again,” Eric said through a mouthful of sandwich.

“The lazy river was my favorite,” Lily added.

“Well, there’s still more to explore,” Dad said, standing up and stretching.

“How about we try the obstacle course next?” The obstacle course was a sequence of floating beams, ropes and slides.

The kids darted ahead eager to show off their skills. Eric was the first to take on the beams, his arms outstretched for balance. Wobbling, but not falling, Eric was successful.

Lily climbed the rope wall with determination, then slid down the other side with a celebratory yell. Dad followed behind, helping and encouraging them when needed.

“Good Job, Lily!” He said, while high fiving her as she completed the course.

Once the obstacle course was completed, they decided to end their day with one last ride down the family raft slide. They all climbed into the large inflatable raft and held on tight as it hurdled down the slide, twisting and turning.

When the raft reached the bottom and made its big splash into the huge pool, Eric shouted “That was awesome!”

Everyone laughed in agreement, all of them dripping wet.

As the sun began to go down, the family gathered their things and made their way out of the park.

“Today was so fun,” Lily said, holding her mom’s hand.

“It really was,” Mom agreed, smiling at her family.

“We’ll have to come back again soon.” Dad wrapped an arm around Mom’s shoulders. “Best family day yet,” he said.

Eric nodded, “Definitely”.

They walked to their car, the sounds of the water park fading behind them, already looking forward to their next family adventure.



Storytelling Contest

Spring District 2024-25

“Water Park”

Grades 2 and 3

by Kathryn Gonzales

Directions to Contest Directors: Give a copy of this sheet to each judge before the contest begins.

Directions to Judges: Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The Johnson family decides to go to a water park to have some fun.
2. Lily and Eric and their parents explore the park and ride the big slide, float the lazy river, and splash in the wave pool, having a great time.
3. When they take a break for lunch, both kids express how much fun they're having and what they want to do with their afternoon.
4. After lunch, the family decide to go on the obstacle course, followed by another trip to the big slide.
5. The whole family had a great day at the water park.



Storytelling Contest

Spring District 2024-25

“Genie in a Jar”

Grades 2 and 3

by Kathryn Gonzales

It was a sunny afternoon when James, Sarah, and Cody decided to explore the old, abandoned house at the edge of town. As they approached it, they saw the overgrown yard was thick, and the exterior of the house was covered in vines.

The house was a place of many rumors and stories, but the people in the town were hesitant to believe.

“Come on, let’s see what’s inside” James urged, sparking with excitement as he waved his friends forward.

Cody and Sara nodded, and the three children crept through the creaky old gate, pushing open the damaged front door.

Once inside they couldn’t escape the dust, and the floorboards groaned with every step they took.

“Look at this place,” Cody said quietly, but his voice echoed and carried in the large empty hall. “I bet we’re the first people to be here in a long time.”

The friends decided to split up and explore to cover more ground. Sarah found an old, tattered book in the living room, while Cody discovered a broken rocking chair. James, on the other hand, was feeling brave and ventured into the basement where he saw it.

It was an old jar, with an elaborate design just sitting on top of a crate.

“Guys, you have to come see this!” James called out to his friends with a slight tremble in his voice from the excitement.

Sarah and Cody rushed down the stairs as fast as their feet would allow. Curious about his findings, they gathered around the jar examining its carvings.

“What do you think it is?” Sarah asked, brushing the dust off the lid.

“I don’t know” James replied. “But let’s open it and find out.”

With a little effort, the three friends managed to pry off the lid. Almost immediately a large blue cloud of smoke began to fill the room. The children stepped back, coughing and waving their hands through the air to clear it.

As the smoke began to settle and clear, a figure emerged—a tall, magnificent genie in a flowing robe that had a similar design to the jar they had just found.

“Who has awakened me?” The genie exclaimed, her voice echoing in the basement.

“We did,” Cody said as he took a slight step forward, his eyes wide with wonder. “Are you a real Genie?”

“Indeed, I am,” the genie replied. “And as your reward for freeing me from my jar, I shall grant you three wishes. Choose wisely.”

The children huddled together, minds racing with possibilities.

“Our first wish should be something incredible, something all three of us can enjoy,” Sarah suggested.

Cody and James nodded in agreement.

James turned towards the genie. “How about a tree house with everything we need for our adventures?”

“We can put it in my back yard,” Cody quietly chimed in.

The genie smirked and waved her hand, and a large flash of light took over the basement. The children covered their eyes and when the light faded, the friends found themselves in Cody’s backyard standing in front of a grand tree house, complete with everything they needed to stay and play or go out into the world and explore.

“Wow, this is perfect!” James exclaimed.

“Thank you, Genie!” Sarah added, bouncing and clapping her hands together with joy.

As they climbed and explored their new tree house, Cody reminded them, “We still have two wishes left and should start thinking about the next one.”

James turned towards the others, hesitant of what they would think and asked, “What if...we could fly?”

Sarah and Cody looked at each other for a moment, then looked back at James with wide eyes.

“Yes!” Sarah yelled. “That would be amazing!”

Cody nodded and they looked to the genie.

“We wish we could fly,” James said. The genie nodded and waved her hand again.

The children started to feel a sensation in their bodies when suddenly they noticed they were floating above the ground. They called out with joy as one by one they soared around the tree house doing flips and tricks.

“This is wild!” Cody shouted, doing a loop the loop.

“We’re like superheroes!” Sarah added while gliding through the air.

As the sun began to set, the friends landed gently on the ground, ecstatic but knowing they had one wish to fulfill.

“What about the last wish?” James asked, looking at his friends.

Sarah thought for a moment and said, “We should wish for something that helps everyone, not just us.”

Cody agreed and suggested, “What if we wish for the old house to be restored and turned into a place or the people in the town to come? Maybe a community center, that way, everyone can enjoy it.” James and Sarah smiled.

“That’s the best idea we’ve had all day.” James said. The children turned to the genie. “For our last wish, we wish for this old house to be turned into a community center.”

The Genie nodded and waved her hand one last time.

The children watched in awe as the old, deteriorating house transformed. The vines fell away, windows repaired themselves and just like that, you would never have known an old crumbling house was where the new community center stood.

“Thank you, Genie!” The children said smiling up at the majestic figure.

The genie replied, “You have chosen wisely, may your generosity bring joy to many”.

With the final wish complete the genie disappeared in a puff of blue smoke.

The three friends took a moment looking at each other in amazement of what just happened.

“Let’s go tell everyone!” Sarah said, and the three took off racing into town ready to share the news of their adventure and the community center with their friends and family.



Storytelling Contest

Spring District 2024-25

“Genie in a Jar”

Grades 2 and 3

by Kathryn Gonzales

Directions to Contest Directors: Give a copy of this sheet to each judge before the contest begins.

Directions to Judges: Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. James, Sarah, and Cody decided to explore the old, abandoned house on the edge of town. The house is rumored to hold many secrets.
2. Inside, the house is very dusty and creaky. While exploring, James finds an elaborate jar and yells for Sarah and Cody to come see it.
3. The kids open the jar and a genie appears. The genie promises the kids 3 wishes for freeing her from the jar.
4. The kids wish for a new treehouse in Cody’s backyard with their first wish. With the second wish, they wish that they could fly.
5. After flying around, they decide that for their final wish, they would like the abandoned house to be repaired and turned into a community center.