

**2025-2026**

**This booklet contains  
practice tests and rules for**

Art (grades 7-8)  
Calculator Applications (grades 6-8)  
Chess Puzzle (grades 6-8)  
Dictionary Skills (grades 7-8)  
Editorial Writing (grades 7-8)  
Impromptu (grades 7-8)  
Listening Skills (grades 7-8)  
Maps, Graphs & Charts (grades 7-8)  
Mathematics (grades 6-8)  
Number Sense (grades 7-8)  
Ready Writing (grades 7-8)  
Science (grades 6-8)  
Social Studies (grades 7-8)

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

**JUNIOR HIGH ACADEMIC  
STUDY MATERIALS BOOKLET**

[www.uiltexas.org/aplus](http://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. \_\_\_\_\_

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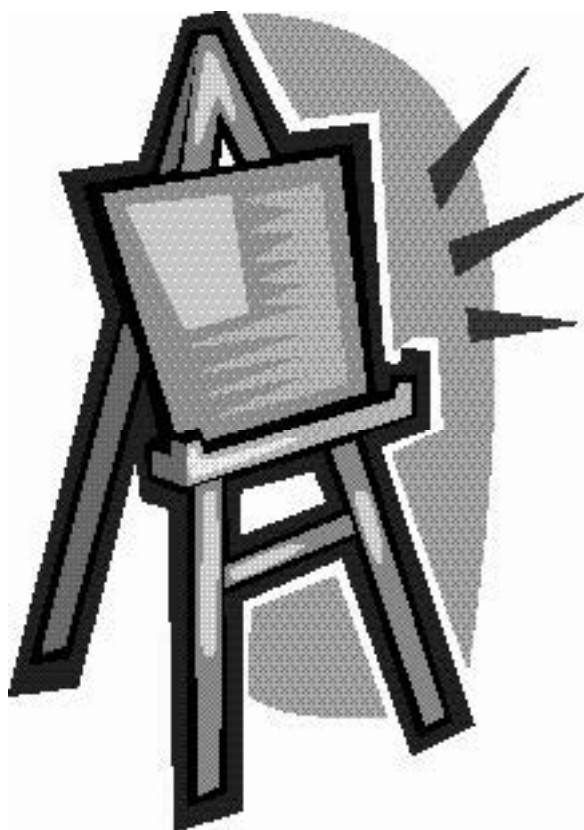
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**INVITATIONAL 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Art Contest

grades 7 & 8

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

## 2024-2025 Invitational Art Test Part B - Grades 7-8

### Art Elements and Principles Section

1. How do warm colors affect the perception of space in a painting?
  - a. They make objects appear smaller
  - b. They make objects appear farther away
  - c. They make objects appear closer
  - d. None of the above
2. Which pair of colors is likely to create the most contrast when placed side by side?
  - a. Purple and yellow
  - b. Blue and green
  - c. Brown and gray
  - d. Red and orange
3. Chiaroscuro is best described as
  - a. A color mixing technique
  - b. The use of light and dark to create depth
  - c. A method of sculpture
  - d. A style of abstract painting
4. How do the creators of abstract art challenge traditional artistic conventions?
  - a. By using only primary colors
  - b. By limiting the variety of brushstrokes and textures in a piece
  - c. By relying on symmetry to create harmony
  - d. By avoiding any recognizable subjects
5. What makes Andy Warhol's *Caroline* a significant example of Pop Art?
  - a. Its focus on classical European subjects
  - b. The fact that a famous movie star is the subject of the painting
  - c. Its use mass production techniques
  - d. Its highly detailed and realistic depiction of the subject
6. Which of the following is NOT a characteristic of Surrealism?
  - a. Juxtaposition of unrelated objects.
  - b. Exploration of dreams and the unconscious mind.
  - c. Use of automatic drawing to express the subconscious.
  - d. Strictly adhering to realistic perspectives
7. How can an artist's brushwork affect the overall texture of a painting?
  - a. By controlling the level of detail and expressiveness
  - b. By creating the illusion of depth in a composition
  - c. By creating contrast between the light and dark areas of a scene
  - d. All of the above
8. In *Noah Leading the Animals into the Ark*, Castiglione's use of thick and thin brushstrokes to create the illusion of fur and feathers exemplifies which art element?
  - a. Rhythm
  - b. Form
  - c. Texture
  - d. Composition



9. How can lines create a sense of depth in a composition?
  - a. By converging towards a vanishing point
  - b. By using straight lines instead of curved or jagged ones
  - c. By outlining the subjects, separating them from the background
  - d. By avoiding overlapping lines
10. Which element of art is most involved when an artist carefully arranges objects in a group for a still life?
  - a. Medium
  - b. Texture
  - c. Composition
  - d. Color

### True/False

11. Green, orange, and purple are secondary colors.
12. Perspective was a technique developed during the Renaissance to create the illusion of depth on a flat surface.
13. Form is three-dimensional, while shape is two-dimensional.
14. The focal point is always the largest object in the painting.
15. The foreground in a painting is the part of the composition that appears closest to the viewer.

### Art History Section

16. How does Grant Wood's *New Road* communicate a sense of hope during the Great Depression?
  - a. By showing a train in the background, heading Westward toward California
  - b. By showing happy Americans engaged in a friendly game of cards
  - c. By presenting the beauty of a natural landscape, untouched by man
  - d. By portraying a sloping, inviting road leading into a lush, green landscape
17. What was the Harlem Renaissance?
  - a. A movement focused on abstract art in the 1960s
  - b. An artistic and intellectual movement celebrating African American culture in the 1920s and 1930s
  - c. A movement created to explore the unconscious mind of the artist
  - d. A school of painting that emerged during the Dutch Golden Age
18. How did Caravaggio's *The Cardsharps* differ from the typical subject matter of Renaissance paintings?
  - a. It focused on mythological themes, which was uncommon in this period.
  - b. It was a landscape with no figures.
  - c. It depicted an everyday scene with real people rather than religious or idealized subjects.
  - d. It was purely abstract, with no identifiable subject.
19. Who were the primary patrons during the Baroque period?
  - a. Middle-class merchants
  - b. Artists like Vermeer, Rembrandt, and Judith Leyster
  - c. The Catholic Church
  - d. Ordinary people who were usually the subjects of genre paintings

20. In *Red Cannas* by Georgia O'Keeffe, neutral colors are used to
- Make the flowers stand out against a calm background
  - Blend the flowers into the background
  - Evoke a feeling of sadness and desolation
  - Imply that the scene is set in a desert landscape
21. The scene depicted in *Supper at Bethany* involves which Biblical figures?
- Noah and his ark
  - David and Goliath
  - Samson and Delilah
  - Jesus and his twelve disciples
22. In *Girls on the Pier*, Munch paints the sky in a dreary teal color, a less saturated version of bright blue. How does this choice affect the overall tone of the painting?
- It brightens the mood of the painting.
  - It evokes a calm feeling in the viewer.
  - It enhances the eerie and haunting atmosphere.
  - None of the above
23. How does rhythm in *Street to Mbari* help to create a sense of unity within the composition?
- By using disjointed and unrelated elements
  - By repeating shapes and colors to connect different areas of the painting
  - By focusing on a single, isolated figure
  - By eliminating any sense of movement
24. How does the painting of the Last Judgment in the background of *Woman Holding a Balance* relate to the woman's actions?
- It emphasizes her wealth and royal status.
  - It distracts the viewer from the main subject.
  - It imbues her action with a feeling of morality.
  - It has no connection to her actions.
25. Andy Warhol's impact on Contemporary art can best be summarized as
- Emphasizing the use of light and shadow in urban scenes.
  - Re-introducing Romantic themes into 20th-century art
  - Redefining art through the commercialization of everyday objects
  - Renewing interest in scenes and images from Greco-Roman mythology.

### True/False

26. During the Renaissance, artists began using acrylic paint to create more colorful and bold images.
27. Picasso's *Bottle of Port and Glass* is considered a traditional still life.
28. Lee Krasner's *Blue and Black* is an example of Cubism.
29. In *Young Girl Plucking a Duck*, Barent Fabritius uses chiaroscuro technique to give an otherwise mundane scene a sense of drama.
30. Sandro Botticelli was a French painter who lived and worked in Paris.

## **2024-2025 Invitational Art Test- Grades 7-8**

### **(Part B)**

#### **Answer Key**

##### **Art Elements and Principles**

##### **Art History**

1. C	(17)	16.D	(60)
2. A	(28)	17.B	(14)
3. B	(11)	18.C	(43)
4. D	(10)	19.A	(44)
5. C	(68)	20.A	(29)
6. D	(62)	21.D	(38)
7. A	(11)	22.C	(51)
8. C	(32)	23.B	(34)
9. A	(17)	24.C	(48)
10.C	(12)	25.C	(68)
11.T	(20)	26.F	(10)
12.T	(19)	27.F	(54)
13.T	(14)	28.F	(64)
14.F	(13)	29.T	(47)
15.T	(14)	30.F	(37)

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

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\_\_\_\_\_ 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**

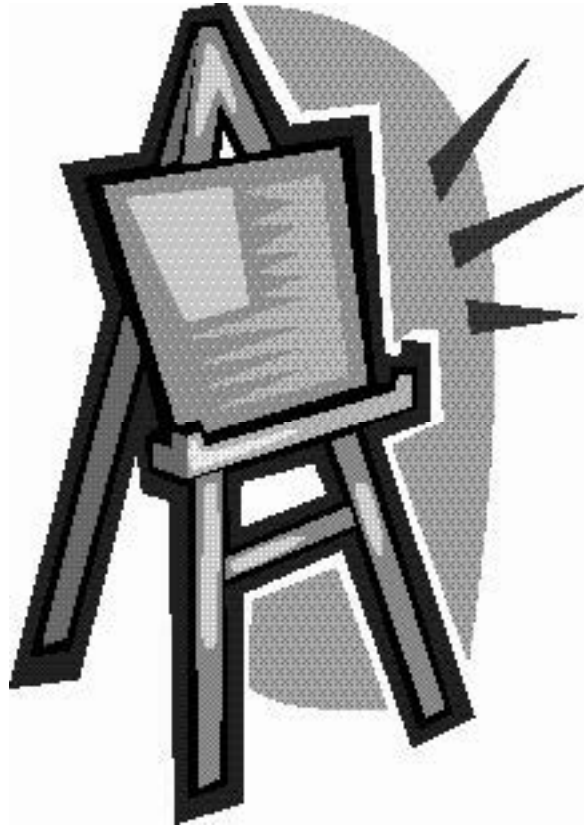
16.   A    B    C    D
17.   A    B    C    D
18.   A    B    C    D
19.   A    B    C    D
20.   A    B    C    D
21.   A    B    C    D
22.   A    B    C    D
23.   A    B    C    D
24.   A    B    C    D
25.   A    B    C    D
26.   True      False
27.   True      False
28.   True      False
29. 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

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Art Contest

grades 7 & 8

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

## 2024-2025 Fall/Winter District Art Test Part B - Grades 7-8

### Art Elements and Principles Section

1. What happens when an artist mixes together or blends two complementary colors?
  - a. They create a new primary color.
  - b. They create a brighter, more vibrant color.
  - c. They make the colors appear less intense.
  - d. They produce a neutral color, often a shade of gray or brown.
2. You are making a painting that explores the different stages of life, and decide to use a young child and an elderly person as your main subjects. What art element is being used here?
  - a. Texture
  - b. Color
  - c. Perspective
  - d. Contrast
3. Which of the following is NOT a primary color?
  - a. Red
  - b. Green
  - c. Yellow
  - d. Blue
4. The use of multiple and repeating rolling hills in *New Road* by Grant Wood creates a sense of continuous movement. What art element does this describe?
  - a. Shape
  - b. Contrast
  - c. Rhythm
  - d. Texture
5. Which of the following types of lines is most likely to create a sense of excitement, rapid movement, or unease in a composition?
  - a. Vertical
  - b. Horizontal
  - c. Zigzag
  - d. Parallel
6. How does lighting contribute to the mood of a painting?
  - a. It can change the texture of the paint, making it look smoother or rougher depending on the light source.
  - b. It can create a sense of drama or calm depending on its intensity and direction.
  - c. It determines whether the painting will appear realistic or abstract.
  - d. It alters the thickness of the paint, giving it a glossy or matte finish.
7. An artist uses rough, uneven brushstrokes that give the painting a tactile quality. What element does this technique emphasize?
  - a. Line
  - b. Texture
  - c. Form
  - d. Composition
8. How might an artist create contrast between the foreground and background to create depth?
  - a. By avoiding the use of any color in the foreground
  - b. By making the foreground darker than the background
  - c. By using warm colors in the foreground and cool colors in the background
  - d. By using the same level of detail in both foreground and background

9. Silk screening is a technique used for
  - a. Painting large murals
  - b. Printing designs on fabric or paper
  - c. Sculpting stone figures
  - d. Mixing paint colors
10. In *Ivy in Flower*, Matisse uses complementary colors blue and orange. Together, these two colors create
  - a. Texture
  - b. Contrast
  - c. Light
  - d. Form

### True/False

11. The point of view chosen by an artist can make a familiar scene seem unusual or unfamiliar.
12. The Regionalist art movement celebrated urban life and industrialization in the United States.
13. A mural is a small, detailed artwork typically created on a canvas.
14. Any painting that does not contain human subjects is considered a landscape painting.
15. To convey meaning or emotion, an abstract artist would use color, form, texture, and other art elements instead of symbolic imagery.

### Art History Section

16. What technique does Romare Bearden use in *Tomorrow I May Be Far Away* to fragment the image and layers of history?
  - a. Collage
  - b. Cubism
  - c. Impressionism
  - d. Silk screening
17. In Diego Rivera's *Delfina Flores*, the subject is wearing
  - a. A Venetian mask
  - b. A bonnet and smock
  - c. An expensive necklace and a diamond ring
  - d. A traditional Mexican dress
18. Which of the following best describes Caravaggio?
  - a. He was the royal painter of the Spanish kingdom
  - b. He used beggars, swindlers, and gamblers as models, reflecting his life on the streets
  - c. He painted imaginary creatures in whimsical, fantasy worlds
  - d. He is considered the father of modern abstract art
19. Why is Abraham van Beyeren's *Banquet Still Life with Roses* considered more than just a pretty scene?
  - a. It was painted to celebrate the harvest period.
  - b. It was meant to remind viewers of the fleeting nature of life and to cherish time.
  - c. It symbolized the artist's dream of becoming a chef.
  - d. It served as an advertisement for perfumes and scented candles.
20. What was one major benefit of Titian living in Venice for his artistic career?
  - a. Access to rare pigments imported from Asia
  - b. The lack of artistic competition in the city
  - c. The city's isolation from international trade
  - d. The ability to work exclusively in black and white

21. The lack of human figures in *House with Fence* by Edward Hopper \_\_\_\_.
- a. Emphasizes the emptiness and loneliness of the scene
  - b. Draws attention to snow-covered hills and pine trees
  - c. Makes the painting abstract
  - d. All of the above
22. What effect do the slanted tiles on the floor of *The Investiture of Saint Ildefonsus* have on the composition?
- a. They adhere to the golden ratio, creating a sense of harmony
  - b. They draw the viewer's eye upward toward the ceiling
  - c. They reinforce the linear perspective and create a sense of depth
  - d. They have no effect on the composition
23. How did Barent Fabritius's *Young Girl Plucking a Duck* differ from Renaissance paintings using chiaroscuro?
- a. It gave drama to an everyday scene rather than a religious one
  - b. It focused on abstraction, rather than representation
  - c. It avoided using light and shadow altogether
  - d. It emphasized non-human figures
24. How does Claude Monet use brushwork in *Weeping Willow* to convey a sense of movement and emotion?
- a. By splattering paint onto the canvas
  - b. By using quick, expressive brushstrokes
  - c. By blending colors seamlessly
  - d. By long, graceful brushstrokes
25. What type of music did the Abstract Expressionist painters like Lee Krasner take inspiration from?
- a. Classical
  - b. Metal
  - c. Jazz
  - d. Country and folk

### True/False

26. During the Contemporary period, artists began experimenting with abstract art.
27. Cubist artists like Pablo Picasso challenged traditional conventions by breaking down objects into geometric shapes and using multiple points of views in a single composition.
28. In *Conversation among the Ruins*, Giorgio de Chirico places the main subjects in a classical Greek temple.
29. Juan de Borgoña, Johannes Vermeer, Luca Cambiaso, and Giovanni Benedetto Castiglione are all examples of Renaissance artists.
30. The Baroque period officially began in the 1400s, in the city of Florence.



## **2024-2025 Fall/Winter District Art Test- Grades 7-8**

### **(Part B)**

### **Answer Key**

#### **Art Elements and Principles**

#### **Art History**

1. D	(16)	16.A	(66)
2. D	(13)	17.D	(57)
3. B	(18)	18.B	(43)
4. C	(34)	19.B	(49)
5. C	(31)	20.A	(41)
6. B	(29)	21.A	(56)
7. B	(32)	22.C	(39)
8. C	(33)	23.A	(47)
9. B	(18)	24.B	(53)
10.B	(28)	25.C	(64)
11.T	(13)	26.T	(10)
12.F	(19)	27.T	(13)
13.F	(16)	28.F	(59)
14.F	(25)	29.F	(36)
15.T	(10)	30.F	(44)

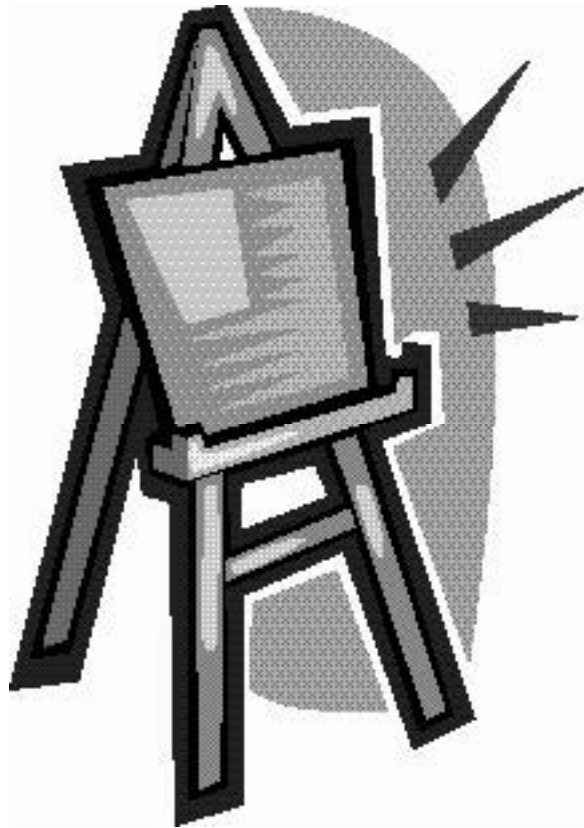
Numbers in parentheses are page numbers where answers can be found in the Art Smart Bulletin for 2023-2024 and 2024-2025.

**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Art Contest

grades 7 & 8

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

## 2024-2025 Spring District Art Test Part B - Grades 7-8

### Art Elements and Principles Section

1. How do warm colors typically affect the emotional tone of a painting?
  - a. They create a sense of calm and serenity
  - b. They make the painting appear more distant
  - c. They evoke energy and excitement
  - d. They mute the intensity of the subject
2. Complementary colors are
  - a. Next to each other on the color wheel
  - b. Directly opposite each other on the color wheel
  - c. Mixed to create secondary colors
  - d. Always warm colors
3. Mixing blue and yellow creates:
  - a. Green
  - b. Orange
  - c. Purple
  - d. Brown
4. Which of the following is a characteristic of Impressionism?
  - a. The smooth blending of colors to create a gradient
  - b. The use of neutral colors only
  - c. The flattening of shapes and lack of depth
  - d. The use of short, broad brushstrokes to capture the effects of light
5. Which of the following art elements can be achieved by using complementary colors in a painting?
  - a. Rhythm
  - b. Point of view
  - c. Contrast
  - d. Depth
6. In abstract art, shapes are often used to represent which of the following?
  - a. Realistic objects and scenes
  - b. Architecture and urban design
  - c. Human anatomy
  - d. Emotions, ideas, or concepts
7. What term describes the method of arranging figures and objects in a painting to create a clear narrative?
  - a. Abstraction
  - b. Composition
  - c. Perspective
  - d. Point of View
8. An artist's oeuvre refers to
  - a. Only their most famous painting
  - b. The palette of colors they use
  - c. The entire body of work they have created
  - d. The style of brushstrokes they use

9. Which of the following creates rhythm in a painting?
  - a. Using every color only once
  - b. Repeating visual elements to create movement
  - c. Placing all objects in the center of the canvas
  - d. Avoiding any patterns
10. What type of line is most likely to create a sense of calmness, fluidity, and grace in a painting?
  - a. Vertical
  - b. Horizontal
  - c. Diagonal
  - d. Curved

### **True/False**

11. The background of a painting is often less detailed than the foreground to enhance the perception of depth.
12. Regionalism in art celebrates rural life in Europe.
13. An artist's choice of medium influences the texture, durability, and color intensity of the final painting.
14. The term "palette" can refer both to the wooden board an artist uses to mix colors and the collection of colors appearing in a painting.
15. A "genre painting" typically depicts subjects or stories from myth, folklore, or history.

### **Art History Section**

16. What was Judith Leyster's likely reason for painting herself in fine clothes in *Self Portrait*?
  - a. To present herself as a respected member of society, not just as an artisan
  - b. To mock or ridicule the daily attire of an artist
  - c. To idealize her beauty
  - d. To hide her identity as a painter
17. In *Holy Family with Saint Anne* by Luca Cambiaso, what is the primary source of light?
  - a. A candle in the background
  - b. The glow emanating from baby Jesus
  - c. The sunlight coming through a window
  - d. A torch held by Saint Anne
18. Which historical event occurred during the Modern period?
  - a. The Vietnam War
  - b. The American Revolution
  - c. World War One
  - d. The Council of Trent
19. What does the term "Renaissance" mean in French?
  - a. "Rebirth"
  - b. "Revolution"
  - c. "Passion"
  - d. "Exploration"

20. What is the point of view in Georgia O'Keeffe's *Red Cannas*?
  - a. The viewer is looking at the flower from above, like a bird.
  - b. The viewer takes multiple points of view.
  - c. The viewer is positioned extremely close to the flower, almost inside it.
  - d. There is no point of view; the composition is entirely abstract.
21. How might the soft, loose brushwork in Titian's *Woman Holding an Apple* affect the viewer's experience of the painting?
  - a. It makes the painting appear unfinished.
  - b. It flattens the overall composition.
  - c. It obscures the details of the woman's face.
  - d. It gives the portrait a lifelike presence when viewed from afar.
22. Why is *The Cardsharps*, like other works by Caravaggio, considered a bridge between the Renaissance and Baroque periods?
  - a. It was painted by two different artists from each period
  - b. It contains elements of dramatic realism and dynamic motion
  - c. It features both religious and mythological figures
  - d. It was commissioned by a Dutch merchant
23. What was the primary intention behind Piet Mondrian's use of lines and primary colors in *Composition with Large Blue Plane, Red, Black, Yellow, Gray*?
  - a. To evoke feelings of anxiety and dread
  - b. To explore the relationship between light and shadow
  - c. To express the underlying harmony of the universe
  - d. To depict a realistic landscape
24. How does Alice Neel's *Dorothy Pearlstein* differ from traditional Renaissance portraits?
  - a. It idealizes the subject, focusing on beauty rather than realism.
  - b. It aims to capture the subject as they were in a single moment rather than depicting the ideal of beauty.
  - c. It uses tempera rather than oil paint.
  - d. It was painted over a long period of time rather than in one sitting.
25. Which artist did NOT belong to the Dutch Golden Age?
  - a. Johannes Vermeer
  - b. Barent Fabritius
  - c. Abraham van Beyeren
  - d. Garofalo

#### True/False

26. *Noah Leading the Animals into the Ark* is an example of a watercolor painting.
27. In Salvador Dalí's *Sacrament of the Last Supper*, the transparent body of Christ symbolizes the temporality of the body and the eternal nature of the soul.
28. Nancy Graves was famous for creating life-size sculptures of camels that blended the lines between art and science.
29. In *Improvisation 31 (Sea Battle)* Kandinsky depicts a scene from the book of Revelations in an extremely realistic style.
30. During the Renaissance, there was a renewed interest in ancient Greek and Roman culture, leading artists like Sandro Botticelli to create mythological paintings.

## **2024-2025 Spring District Art Test- Grades 7-8**

### **(Part B)**

### **Answer Key**

#### **Art Elements and Principles**

#### **Art History**

1. C	(28)	16.A	(45)
2. B	(28)	17.B	(42)
3. A	(27)	18.C	(50)
4. D	(50)	19.A	(36)
5. C	(13)	20.C	(58)
6. D	(26)	21.D	(41)
7. B	(34)	22.B	(43)
8. C	(16)	23.C	(55)
9. B	(34)	24.B	(67)
10.D	(31)	25.D	(40)
11.T	(17)	26.F	(46)
12.F	(19)	27.T	(62)
13.T	(15)	28.T	(69)
14.T	(17)	29.F	(52)
15.F	(24)	30.T	(37)

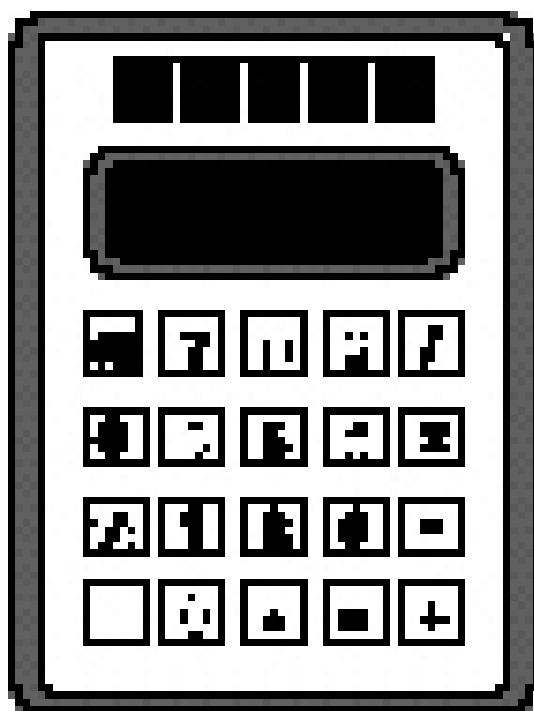
Numbers in parentheses are page numbers where answers can be found in the Art Smart Bulletin for 2023-2024 and 2024-2025.

**INVITATIONAL 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Calculator Applications

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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\*, 1.23x10<sup>0</sup>\*,  
1.23x10<sup>1</sup>, 1.23x10<sup>01</sup>, .0190, 0.0190, 1.90x10<sup>-2</sup>

Incorrect: 12.30, 123.0, 1.23(10)<sup>2</sup>, 1.23·10<sup>2</sup>, 1.230x10<sup>2</sup>,  
1.23\*10<sup>2</sup>, 0.19, 1.9x10<sup>-2</sup>, 19.0x10<sup>-3</sup>, 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 9<sup>th</sup> 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=\_\_\_\_\_

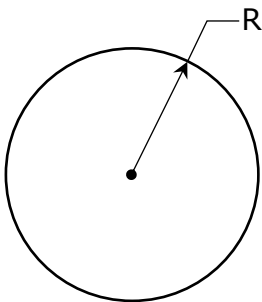
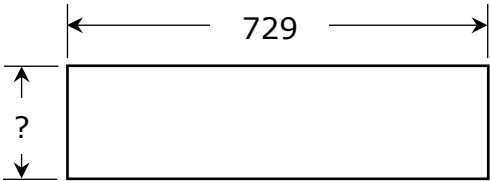
25X-32.  $[0.216] \left[ \frac{1/9.41 \times 10^{-4}}{1/0.00169} \right]$  ----- 32=\_\_\_\_\_

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

<p>25X-37.</p> <p style="text-align: center;">CIRCLE</p> <div style="text-align: center;">  <p>Radius = 0.681</p> </div> <p style="text-align: center;">Circumference = ?</p> <p>25X-37=_____</p>	<p>25X-38.</p> <p style="text-align: center;">RECTANGLE</p> <div style="text-align: center;">  <p>729</p> <p>?</p> </div> <p style="text-align: center;">Area = 183000</p> <p>25X-38=_____</p>
--	--

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= \_\_\_\_\_

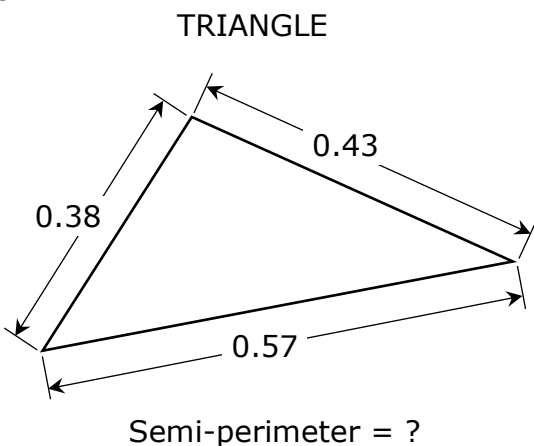
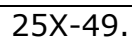
25X-44.  $(17100)\sqrt{38500 + 20700 + 39200}$  ----- 44=

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

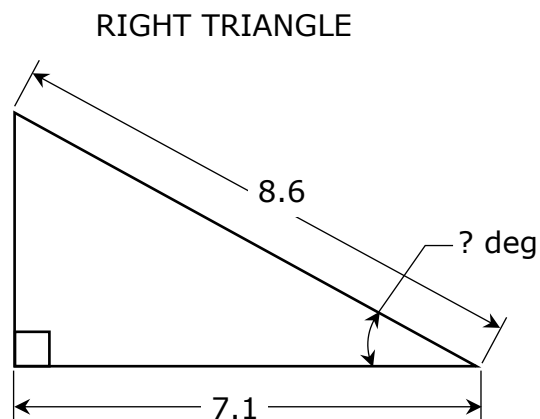
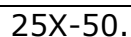
25X-46.  $(468)\sqrt{3480 + 4790 - 4300}$  ----- 46=

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



$25x - 49 =$



$25^\circ - 50^\circ =$  deg

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

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

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

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

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

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

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

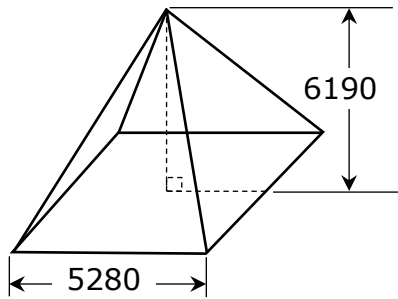
$$25X-58. \quad \sqrt{\frac{(30.7)(594)}{(681) + (1450)}} - 4.07 \text{ ----- } 58 = \underline{\hspace{2cm}}$$

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

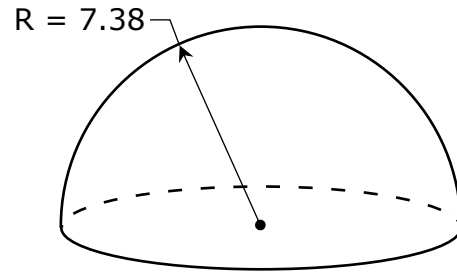


Volume = ?

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= \_\_\_\_\_

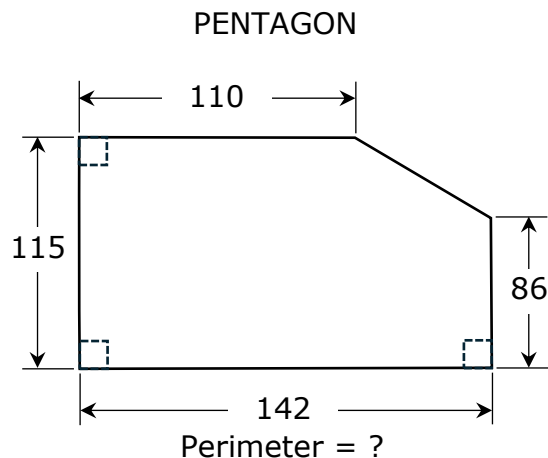
25X-69. (deg)  $\frac{\tan(19.5^\circ)}{5850 + 2370}$  ----- 69= \_\_\_\_\_

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  $48.9^\circ\text{C}$ , what is this temperature in degrees Fahrenheit ( $^\circ\text{F}$ )? ----- 72= \_\_\_\_\_  $^\circ\text{F}$

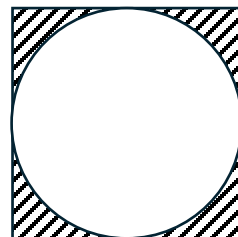
25X-73.



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



## 2024 – 2025 UIL MS Calculator Test A Answer Key

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

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

$$25X-41 = 3.16$$

$$= 3.16 \times 10^0$$

$$25X-42 = 0.719$$

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

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

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

$$25X-45 = 7.44$$

$$= 7.44 \times 10^0$$

$$25X-46 = 29500$$

$$= 2.95 \times 10^4$$

$$25X-47 = 225$$

$$= 2.25 \times 10^2$$

$$25X-48 = 54.2$$

$$= 5.42 \times 10^1$$

$$25X-49 = 0.690$$

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

$$25X-50 = 34.4$$

$$= 3.44 \times 10^1$$

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

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

$$25X-53 = 938000$$

$$= 9.38 \times 10^5$$

$$25X-54 = 226$$

$$= 2.26 \times 10^2$$

$$25X-55 = 10000$$

$$= 1.00 \times 10^4$$

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

$$25X-57 = 8.70$$

$$= 8.70 \times 10^0$$

$$25X-58 = -1.14$$

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

$$25X-59 = 73.2$$

$$= 7.32 \times 10^1$$

$$25X-60 = -4.51$$

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

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

$$25X-62 = 842$$

$$= 8.42 \times 10^2$$

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

$$25X-64 = 1170$$

$$= 1.17 \times 10^3$$

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

$$25X-66 = -0.000166$$

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

$$25X-67 = 1.00$$

$$= 1.00 \times 10^0$$

$$25X-68 = 447$$

$$= 4.47 \times 10^2$$

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

$$25X-70 = 11.9$$

$$= 1.19 \times 10^1$$

$$25X-71 = 68000$$

$$= 6.80 \times 10^4$$

$$25X-72 = 120$$

$$= 1.20 \times 10^2$$

$$25X-73 = 496$$

$$= 4.96 \times 10^2$$

$$25X-74 = 13400$$

$$= 1.34 \times 10^4$$

$$25X-75 = 0.000197$$

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

$$25X-76 = 0.721$$

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

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

$$25X-78 = -2.18$$

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

$$25X-79 = 122000$$

$$= 1.22 \times 10^5$$

$$25X-80 = 0.341$$

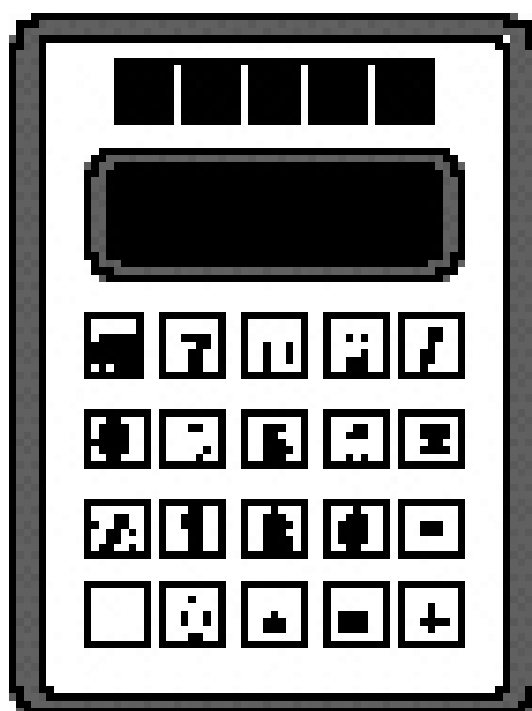
$$= 3.41 \times 10^{-1}$$

**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)

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Incorrect: 12.30, 123.0, 1.23(10)<sup>2</sup>, 1.23·10<sup>2</sup>, 1.230x10<sup>2</sup>,  
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*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

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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 1¾ 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

Perimeter = 22.8

25Y-37= \_\_\_\_\_

25Y-38.

SEMICIRCLE

Area = ?

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

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

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

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

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

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

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

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

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

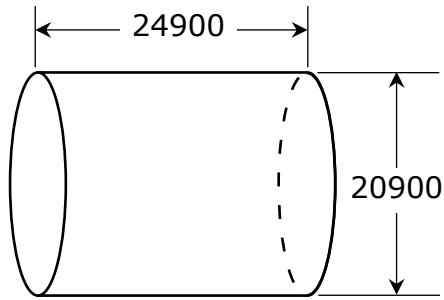
25Y-59. Between 2021 and 2022 the city of Frisco, Texas grew from 193,140 to 202,075. What percent increase did this represent? ----- 59 =                      %

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

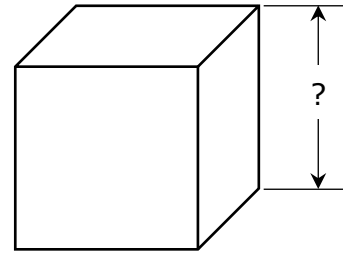


Volume = ?

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= \_\_\_\_\_

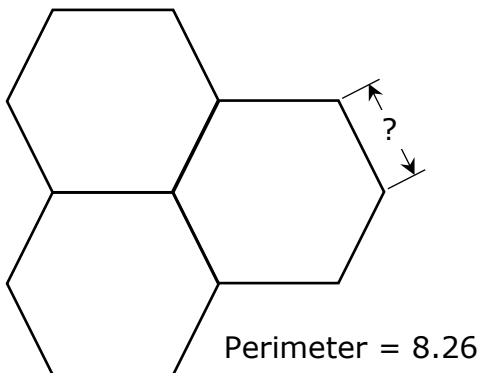
25Y-70.  $(232 - 69.7)^{0.0338 - 0.0205}$  ----- 70= \_\_\_\_\_

25Y-71. On February 12, 1899, the coldest recorded temperature in Texas was recorded in Tulia. If this temperature was listed as  $-30.6^\circ\text{C}$ , 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.

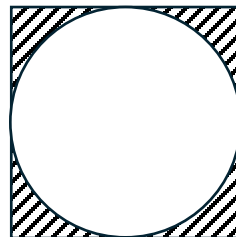
IDENTICAL REGULAR HEXAGONS



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

## 2024 – 2025 UIL MS Calculator Test B Answer Key

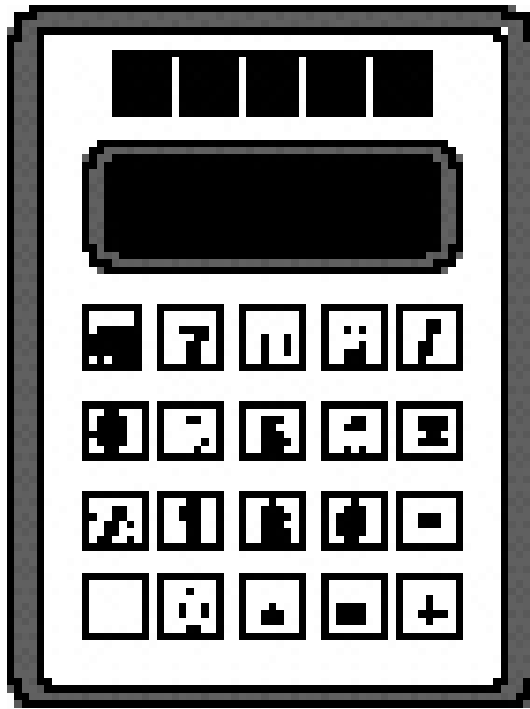
25Y-39	= 730000 = $7.30 \times 10^5$	25Y-51	= 1.17 = $1.17 \times 10^0$	25Y-61	= $8.54 \times 10^{12}$	25Y-73	= 0.688 = $6.88 \times 10^{-1}$
25Y-40	= 0.192 = $1.92 \times 10^{-1}$	25Y-52	= $6.75 \times 10^{-8}$	25Y-62	= 0.00371 = $3.71 \times 10^{-3}$	25Y-74	= 273 = $2.73 \times 10^2$
25Y-41	= $4.05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

**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\*, 1.23x10<sup>0</sup>\*,  
1.23x10<sup>1</sup>, 1.23x10<sup>01</sup>, .0190, 0.0190, 1.90x10<sup>-2</sup>

Incorrect: 12.30, 123.0, 1.23(10)<sup>2</sup>, 1.23·10<sup>2</sup>, 1.230x10<sup>2</sup>,  
1.23\*10<sup>2</sup>, 0.19, 1.9x10<sup>-2</sup>, 19.0x10<sup>-3</sup>, 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=\_\_\_\_\_

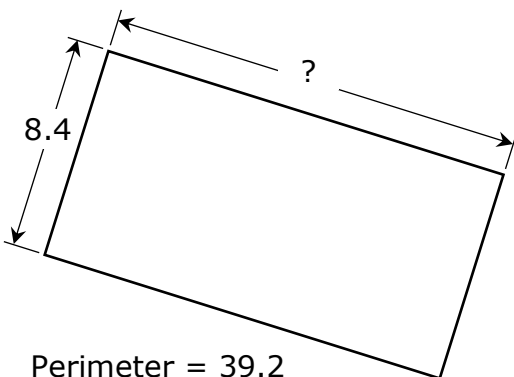
25Z-34.  $\frac{1}{40.9} - \frac{1}{(11 + 85.6)}$  ----- 34=\_\_\_\_\_

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.

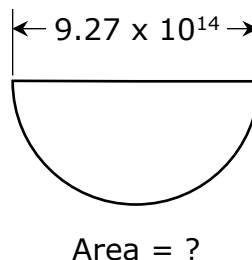
RECTANGLE



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

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

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

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

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

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

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

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

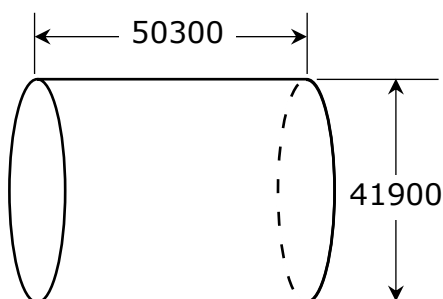
$$25Z-58. \quad \sqrt{\frac{(21.1)(63.9)}{(20) + (27.5)}} + 1/(0.716)^5 \text{ ----- } 58 = \underline{\hspace{2cm}}$$

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

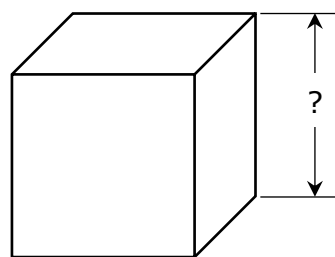


Volume = ?

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=\_\_\_\_\_

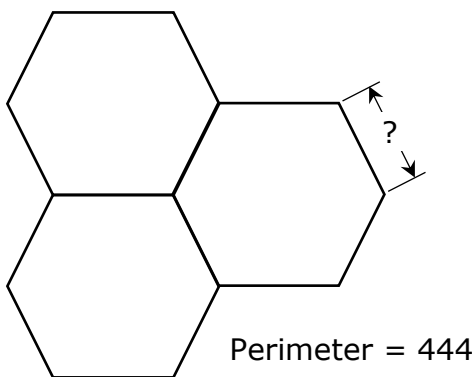
25Z-70.  $(234 - 32.4 + 86.2)^{5/3}$  ----- 70=\_\_\_\_\_

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  $56.7^\circ\text{C}$ , 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.

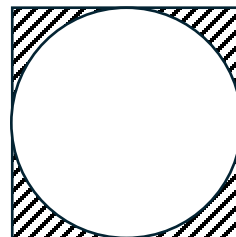
IDENTICAL REGULAR HEXAGONS



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

2024 – 2025 UIL MS Calculator Test C Answer Key

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

**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

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

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

**Tiebreaker** (circle only one answer for each question)

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

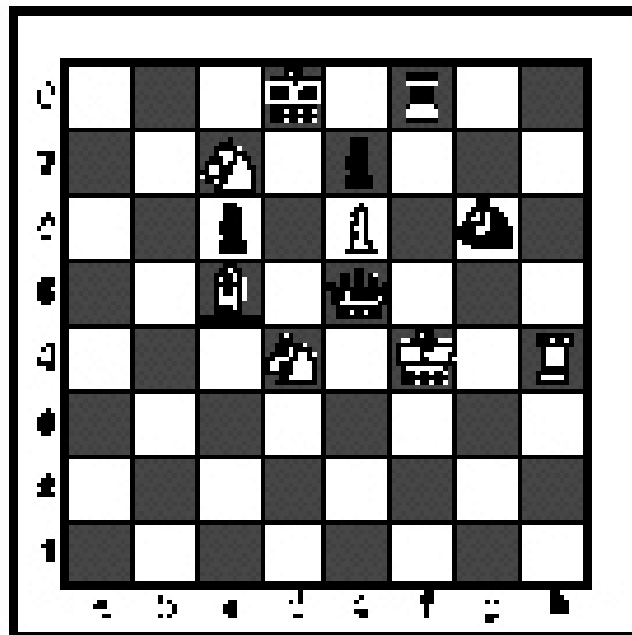


**INVITATIONAL 2024-2025**

**A+ ACADEMICS**



University Interscholastic League

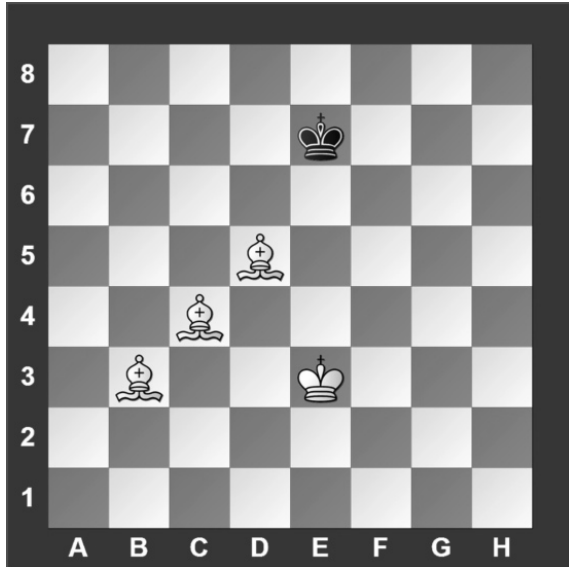


# Chess Puzzle Solving

## TIEBREAKER - ALL GRADES

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

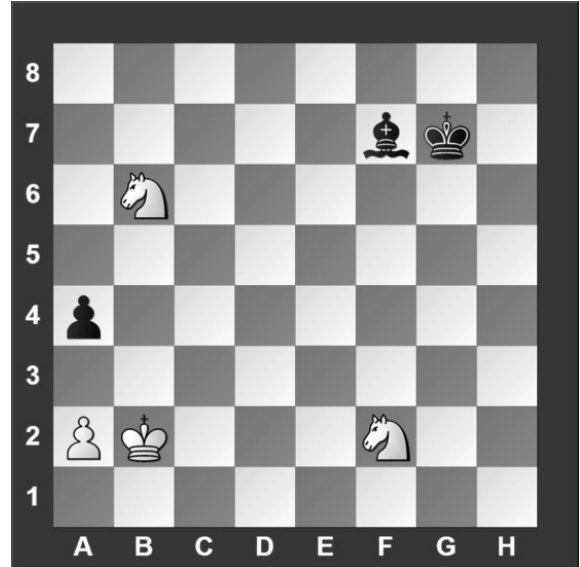
#1. White to move



What should be the outcome of the game?

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

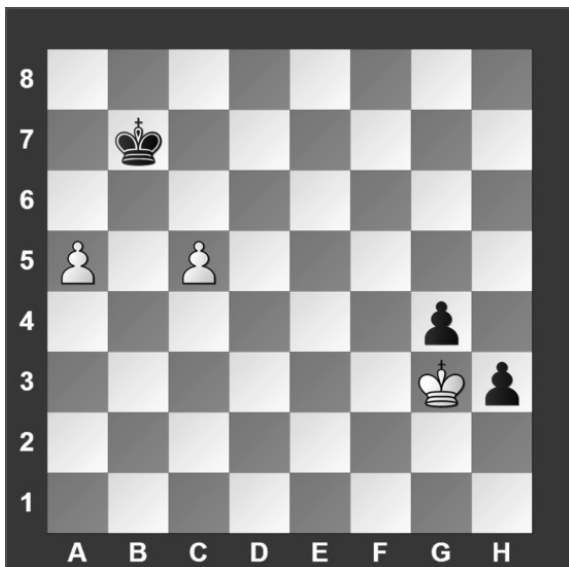
#2. White to move



What is White's best move?

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

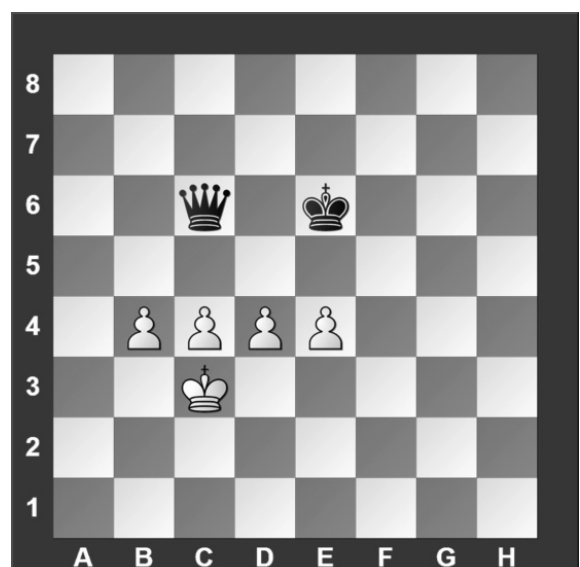
#3. White to move



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.

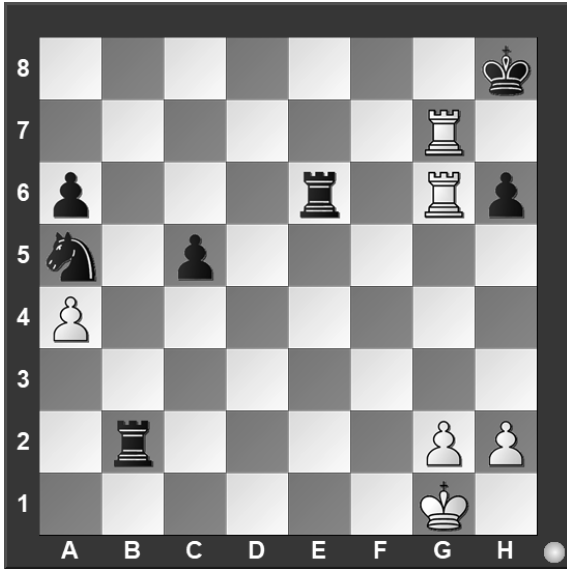
#4. White to move



What is White's best move?

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

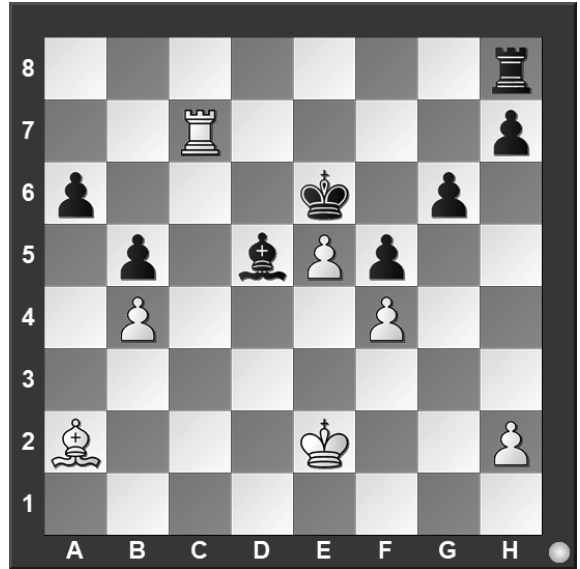
#5. White to move



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

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

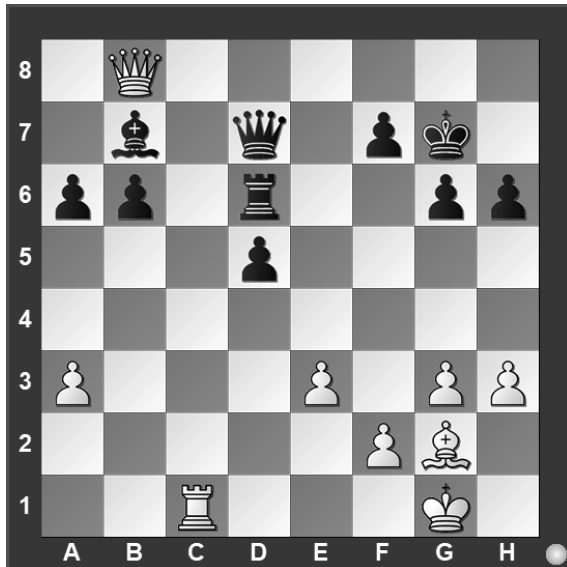
#6. White to move



What is White's best move?

- a) ♖c6
- b) ♙×d5
- c) ♖c5
- d) ♖a7

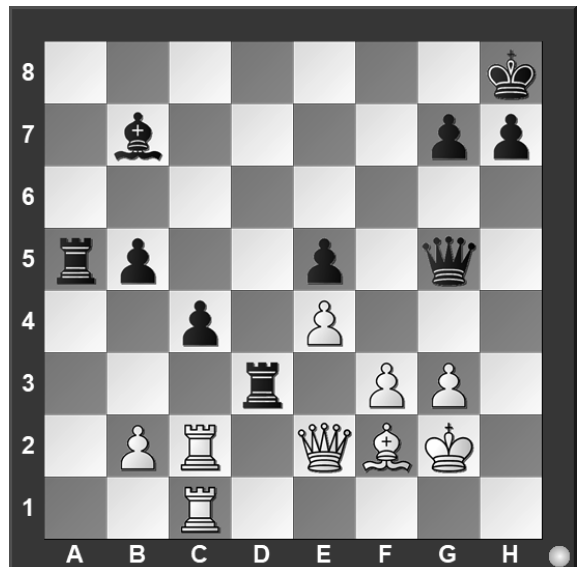
#7. White to move



What is White's best move?

- a) ♖c7
- b) h4
- c) ♙c7
- d) ♙f3

#8. White to move



What is White's best move?

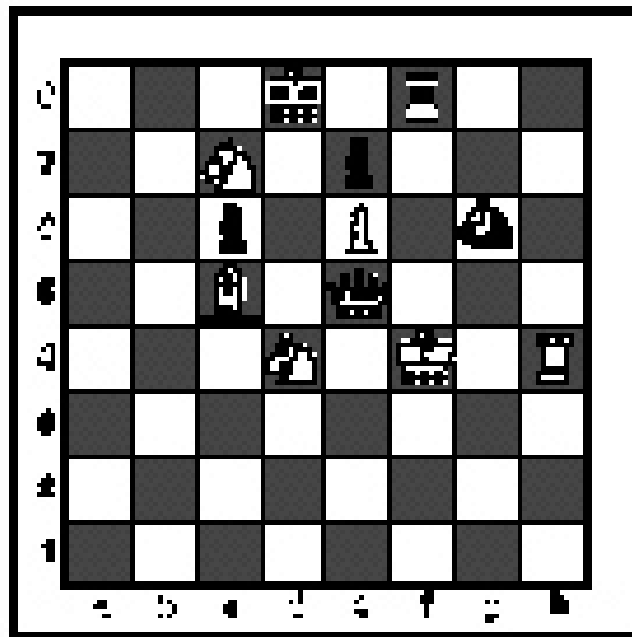
- a) ♖d1
- b) ♙×d3
- c) b4
- d) ♙b6

# INVITATIONAL 2024-2025

## A+ ACADEMICS



University Interscholastic League



# Chess Puzzle Solving

grades 6, 7, 8

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

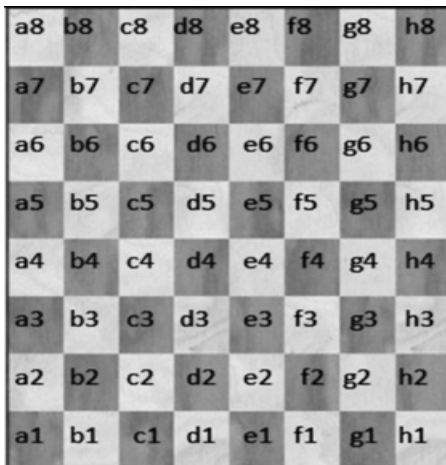
**IMPORTANT INSTRUCTIONS:****[Test-administrators, please read text in this box aloud.]**

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 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**

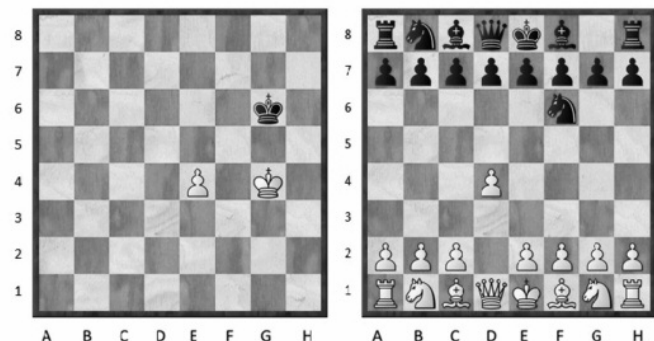
(We write the file it's on.)

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

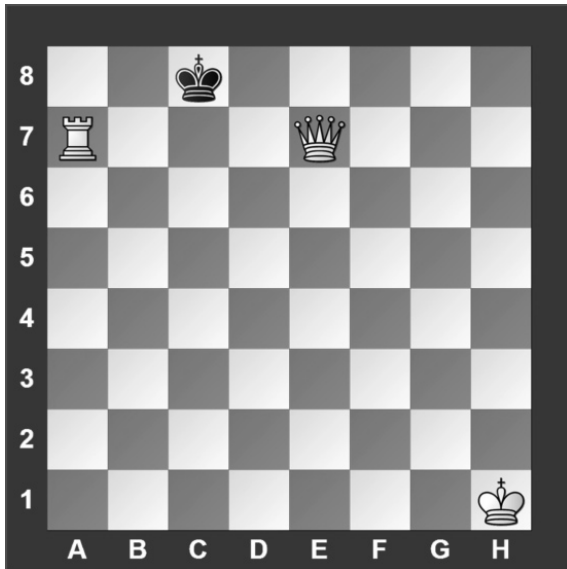
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

**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**.

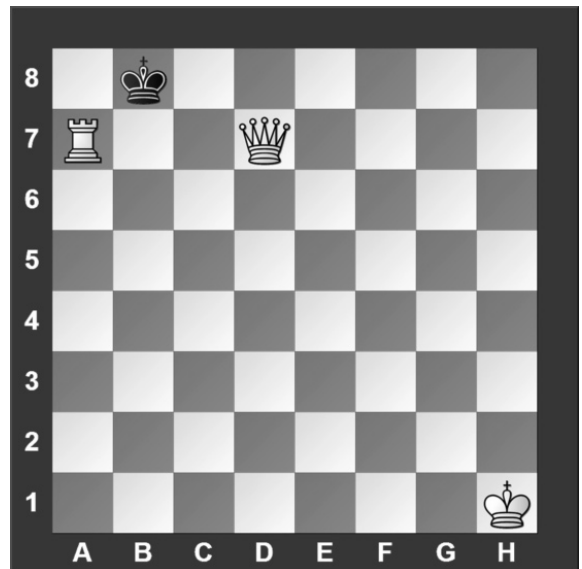
#1. Black to move



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.

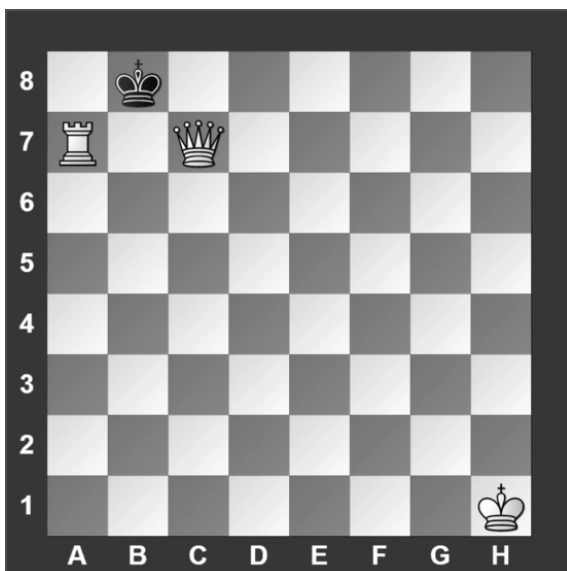
#2. Black to move



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.



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

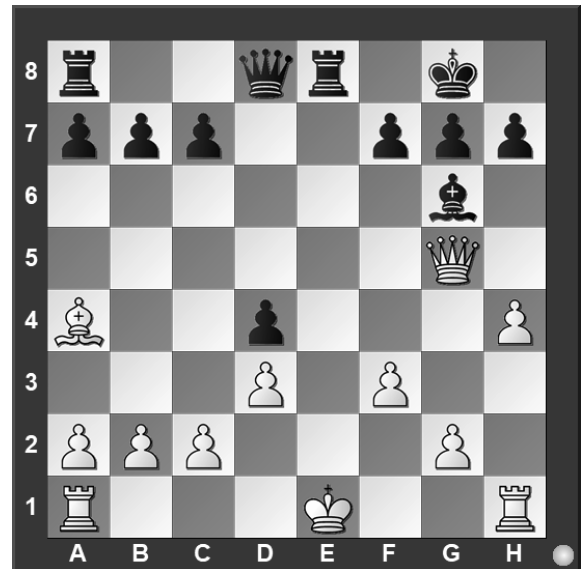
#5. White to move



Which side has material advantage?

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

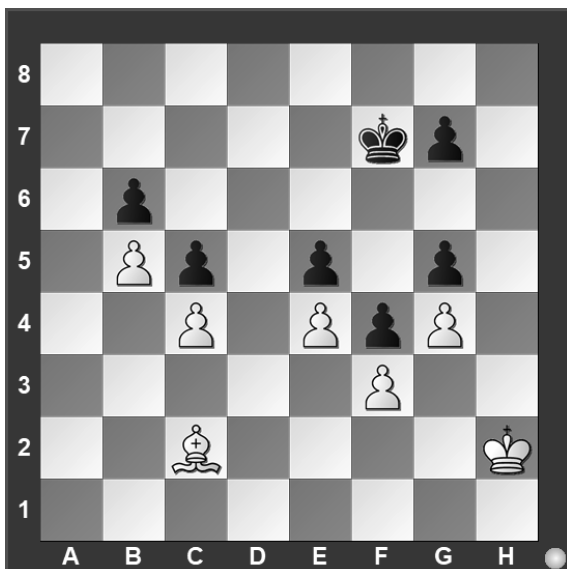
#6. White to move



Which move is possible for White?

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

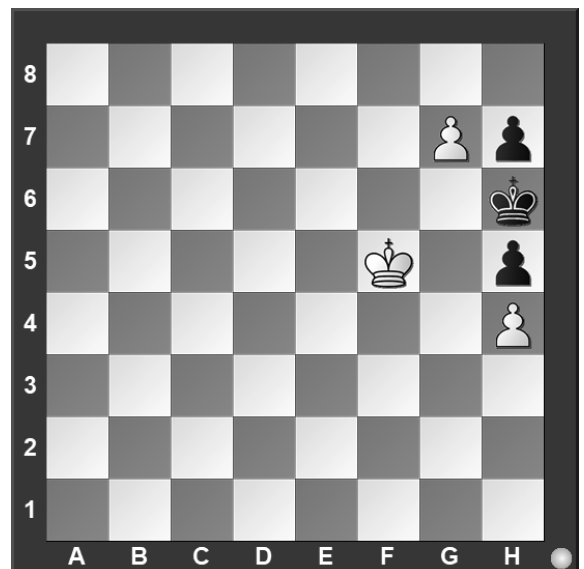
#7. White to move



What is the outcome of the game?

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

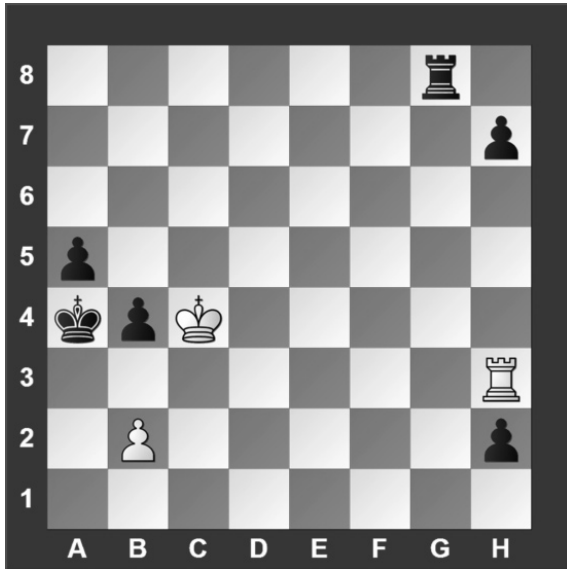
#8. White to move



What piece should White promote to?

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

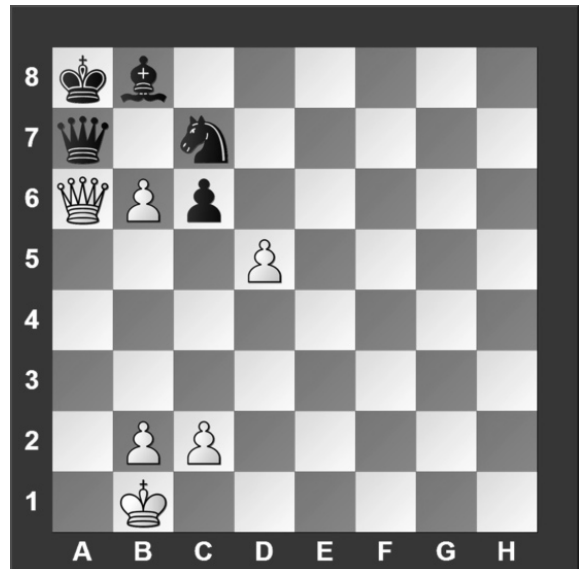
#9. White to move



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

- a) b3
- b) ♖×h7
- c) ♕a3
- d) ♖×h2

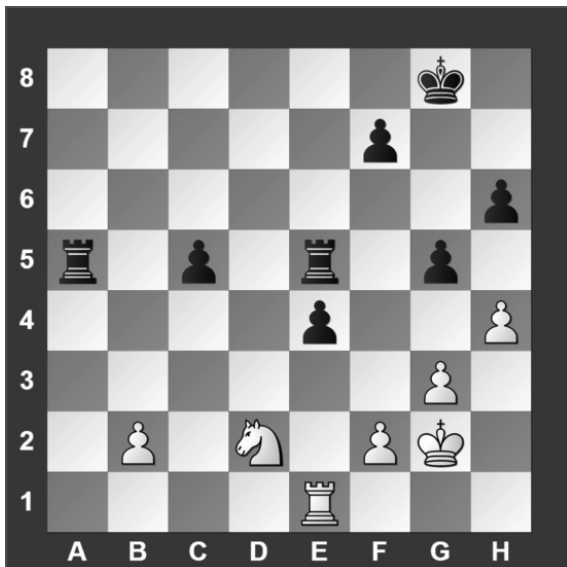
#10. White to move



What is White's best move?

- a) b×a7
- b) b×c7
- c) ♕×a7
- d) b7

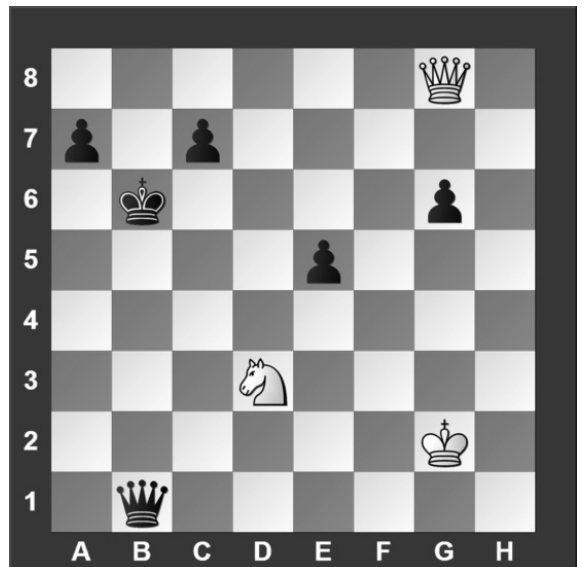
#11. White to move



What is White's best move?

- a) ♘×e4
- b) ♘c4
- c) ♖×e4
- d) ♘b3

#12. White to move

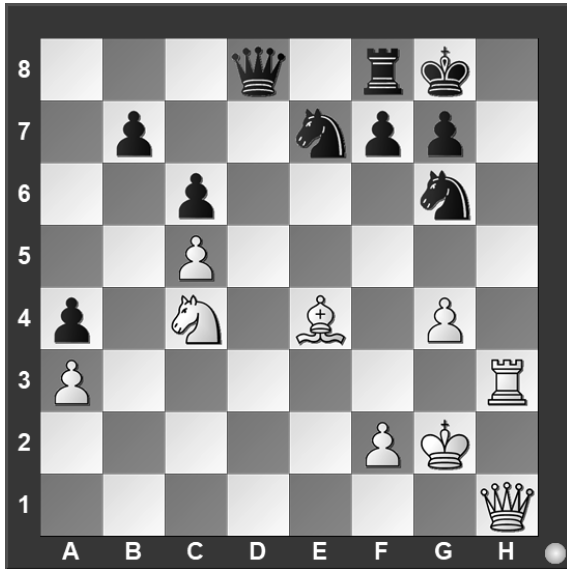


What is White's best move?

- a) ♕b8
- b) ♕e6
- c) ♕×g6
- d) ♘×e5



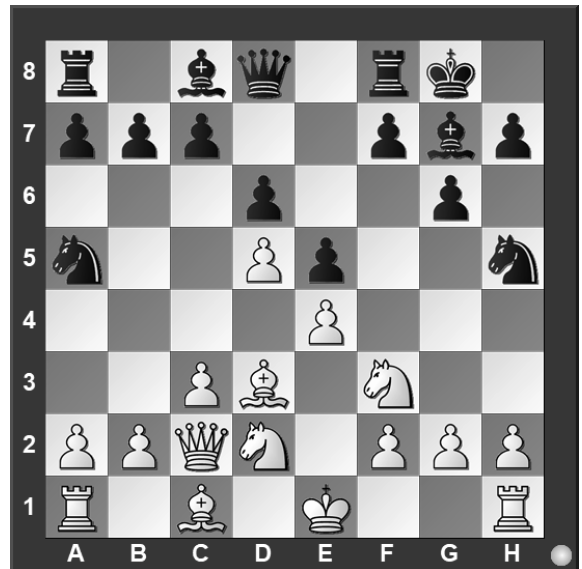
#13. White to move



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

- a) ♖h8
- b) ♖d3
- c) ♕xg6
- d) ♗e5

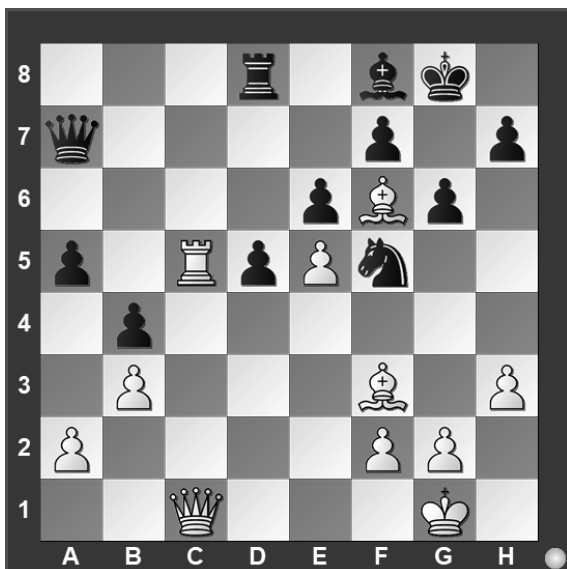
#14. White to move



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

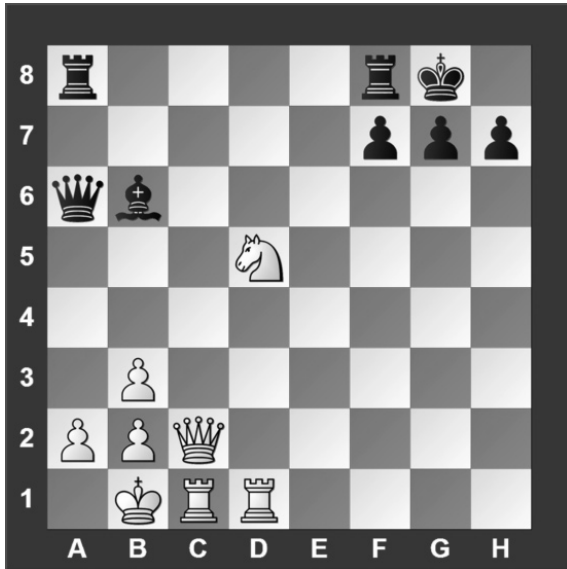
#16. White to move



What is White's best move?

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

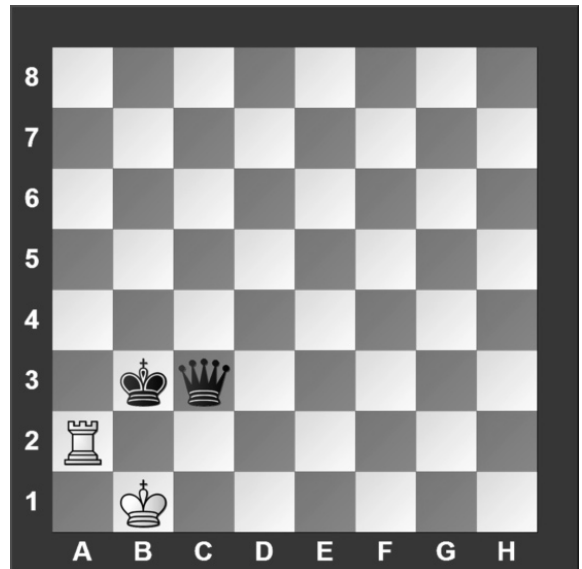
#17. White to move



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

- a) ♘e7
- b) ♙×h7
- c) ♘f6
- d) ♖g1

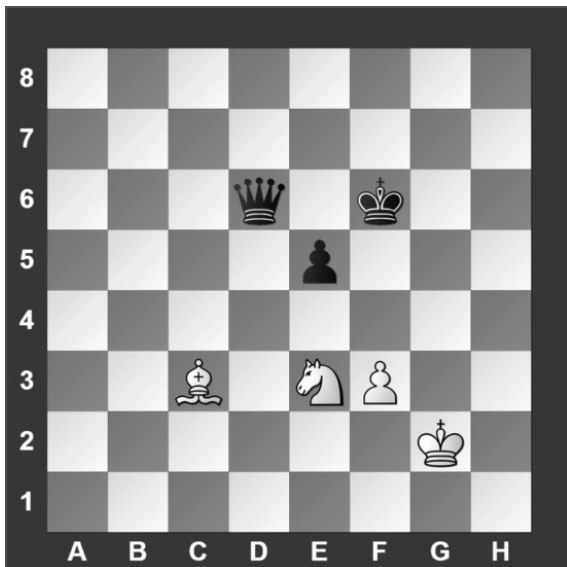
#18. White to move



What is White's best move?

- a) ♖b2
- b) ♖a8
- c) ♖a3
- d) ♖h2

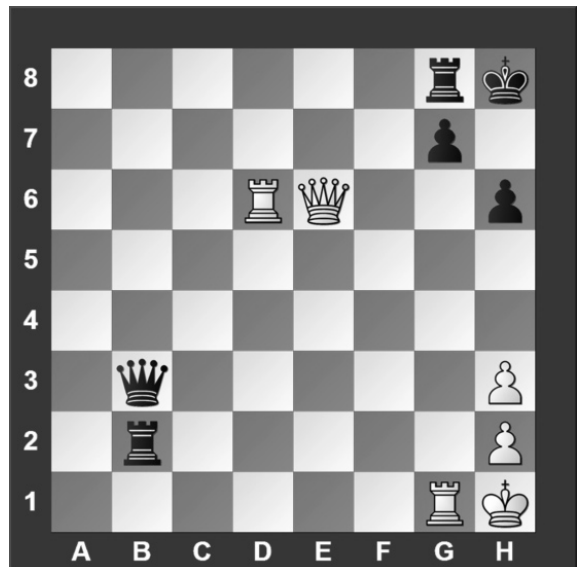
#19. White to move



What is White's best move?

- a) ♘g4
- b) ♙×e5
- c) f4
- d) ♘c4

#20. White to move



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

- a) ♙×g8
- b) ♖×g7
- c) ♙×h6
- 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**

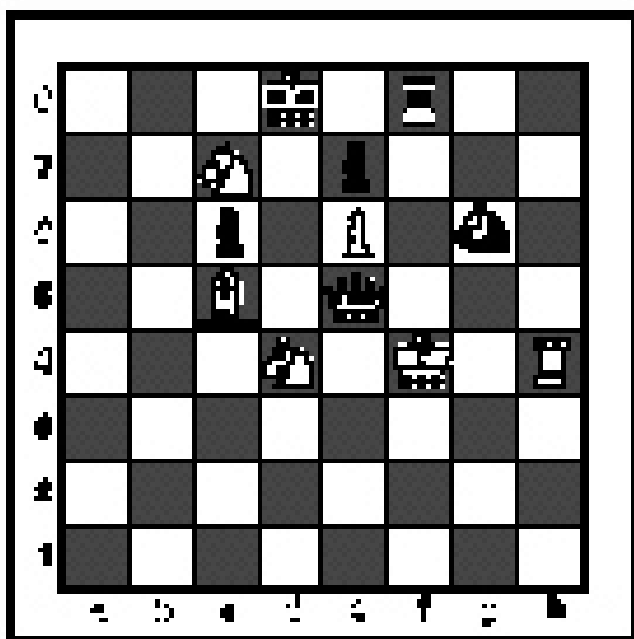
- |    |   |    |   |
|----|---|----|---|
| 1. | C | 5. | B |
| 2. | A | 6. | A |
| 3. | C | 7. | A |
| 4. | C | 8. | B |

**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.

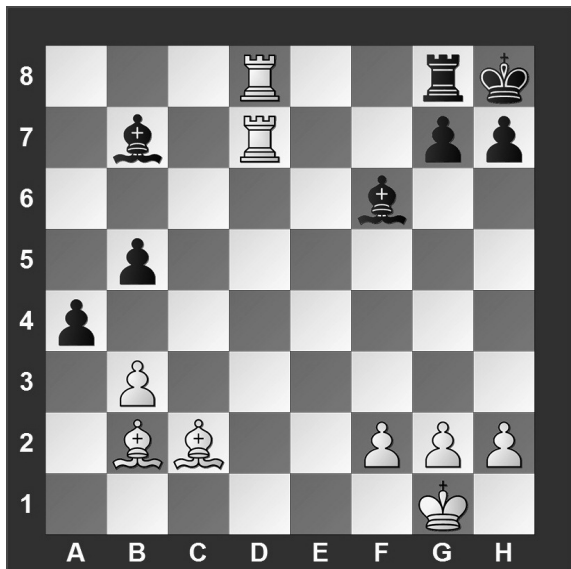
**Use the separate answer sheet to write all your answers.** You have five (5) minutes to take this part of the test. There are eight (8) questions. Some questions are very difficult.

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!

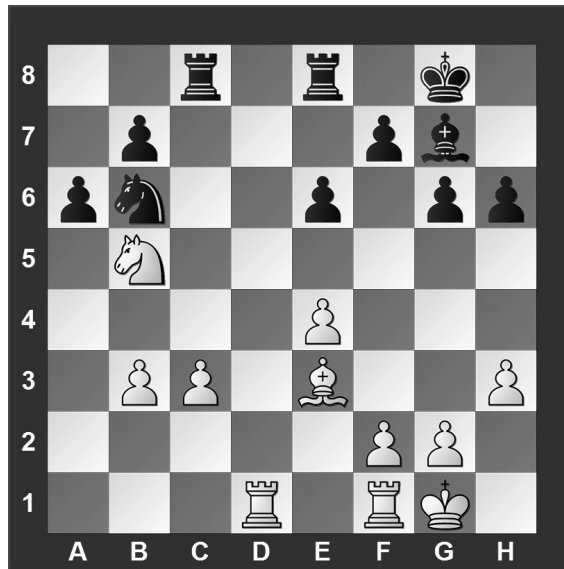
#1. White to move



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

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

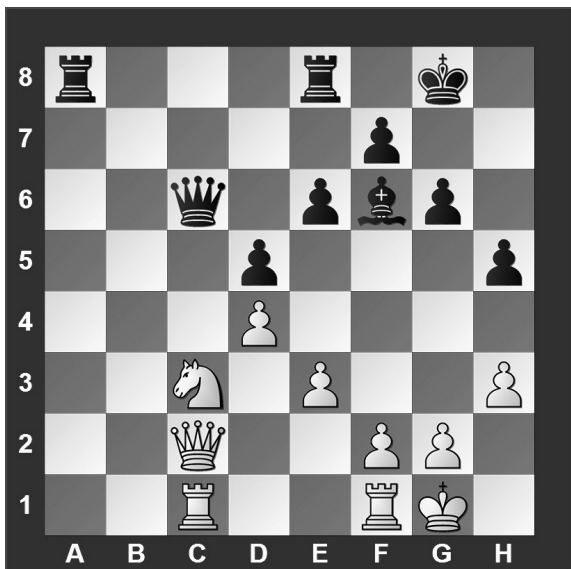
#2. White to move



What is White's best move?

- a) ♘d6
- b) ♘a7
- c) ♗×b6
- d) c4

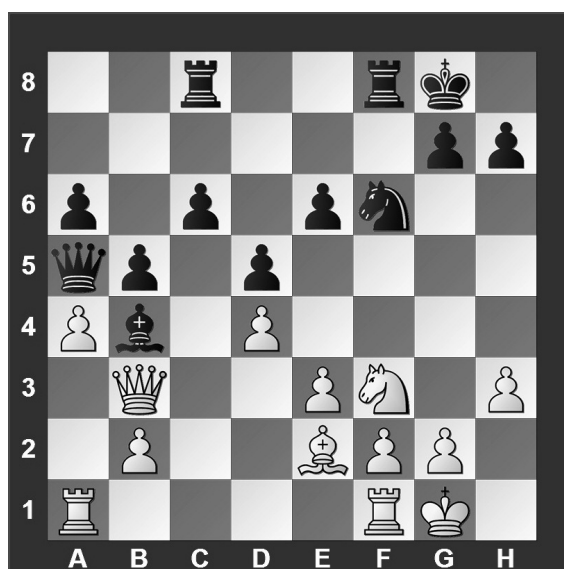
#3. White to move



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

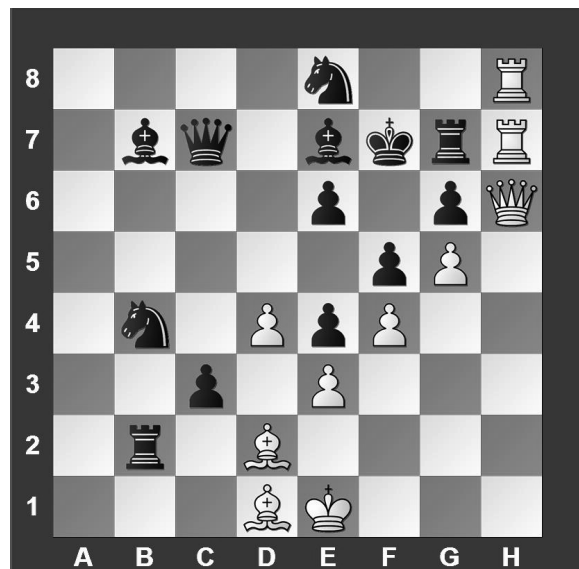
#6. White to move



What is White's best move?

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

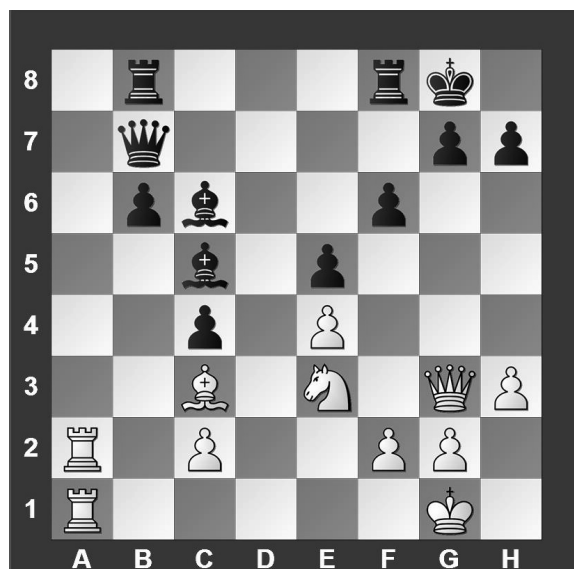
#7. White to move



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?

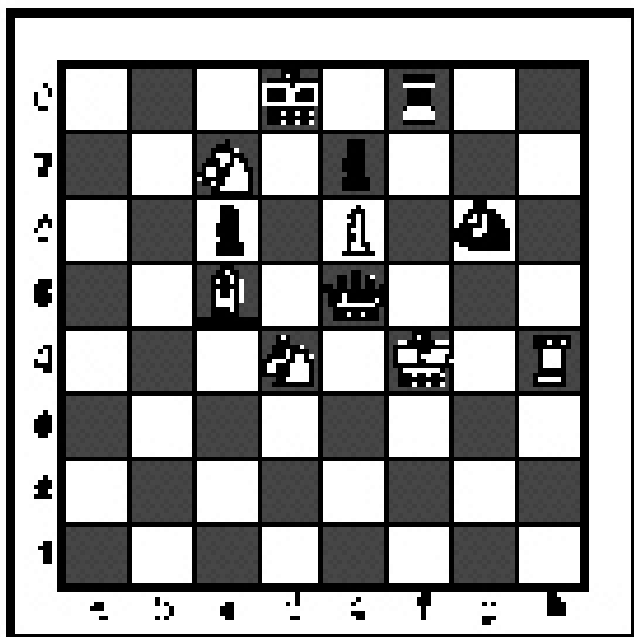
- a) ♘f5
- b) ♔xg7
- c) ♖a7
- d) ♙xe5

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

grades 6, 7, 8

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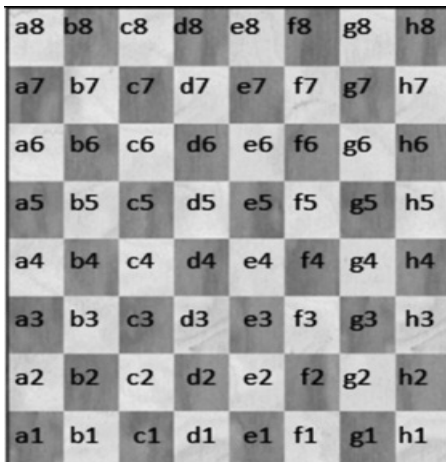
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**Piece Names**

King

Queen

Rook

Bishop

Knight

Pawn

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

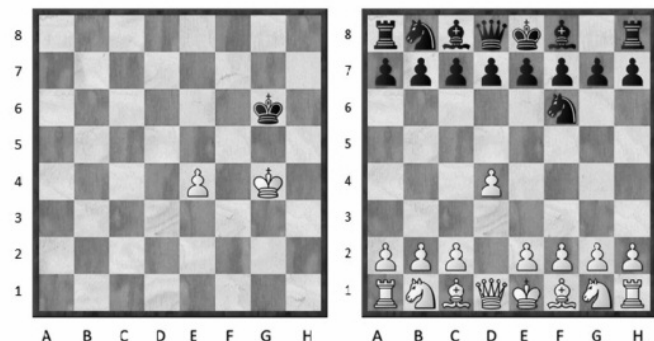
**a-h**

(We write the file it's on.)

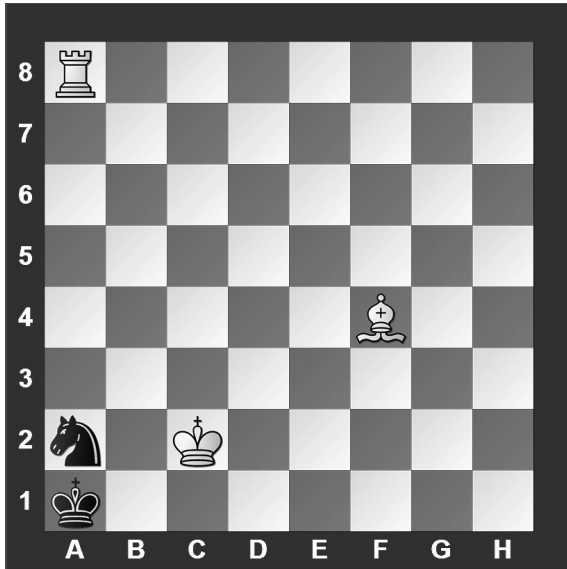
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**At right are two sample moves.**

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**.

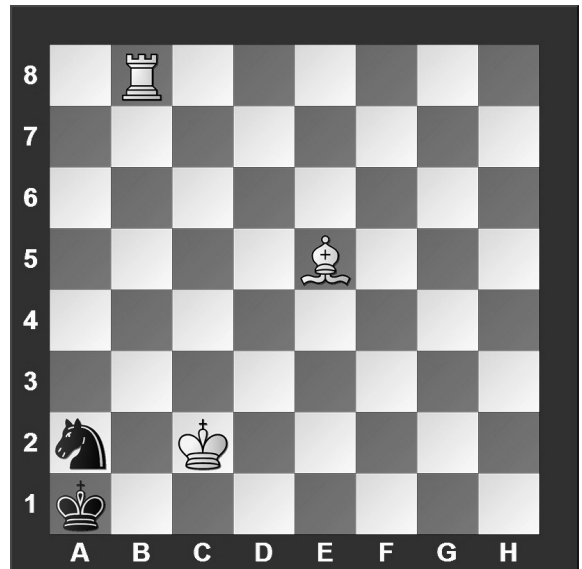
#1. Black to move



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.

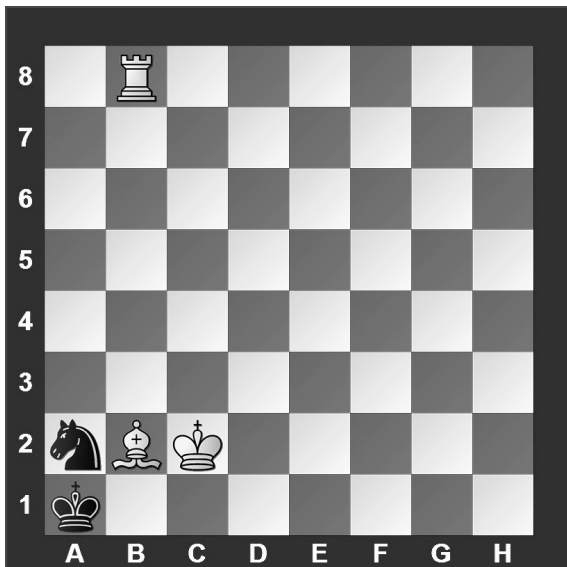
#2. Black to move



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.

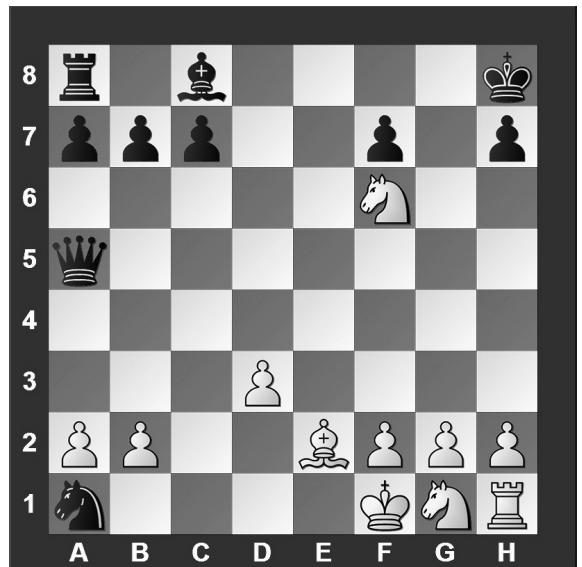
#3 Black to move.



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.

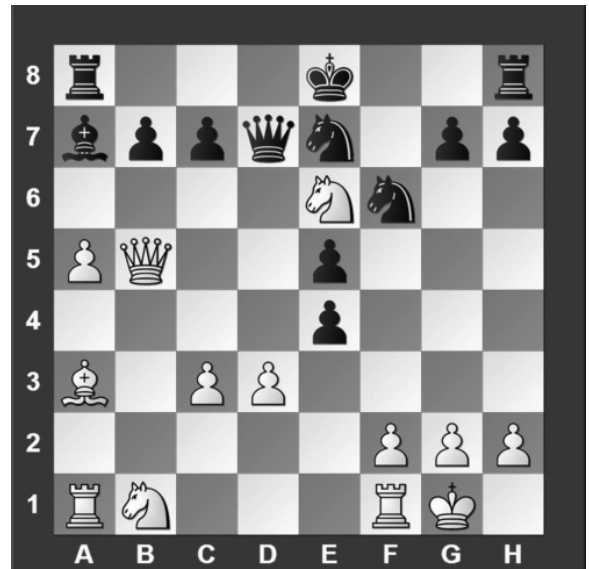
#5.



Which side has material advantage?

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

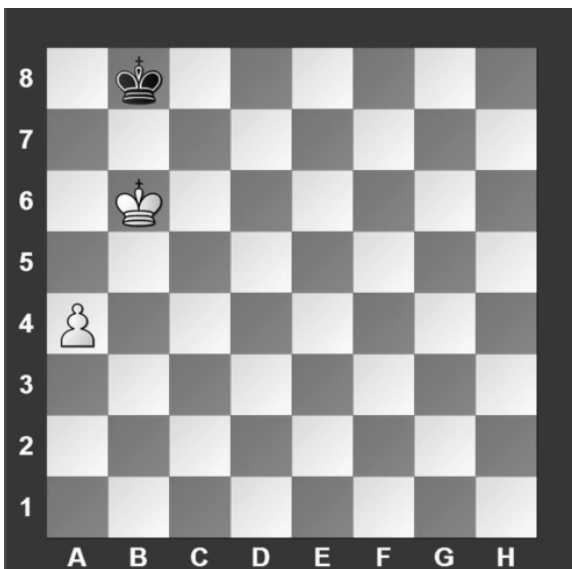
#6. Black to move



Which move is possible for Black?

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

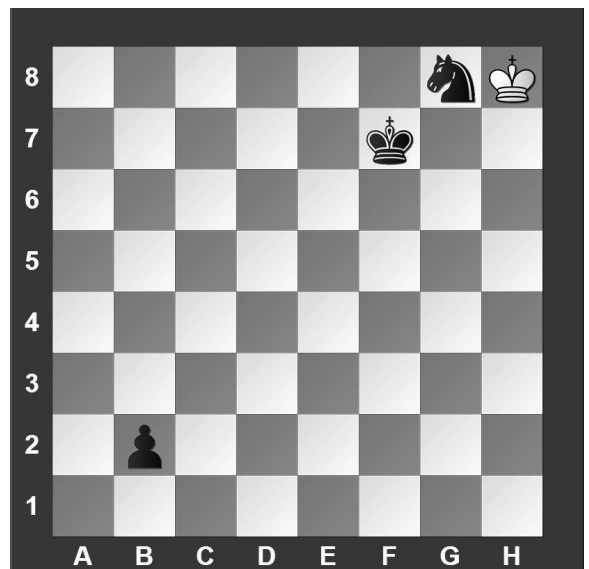
#7. White to move



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

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

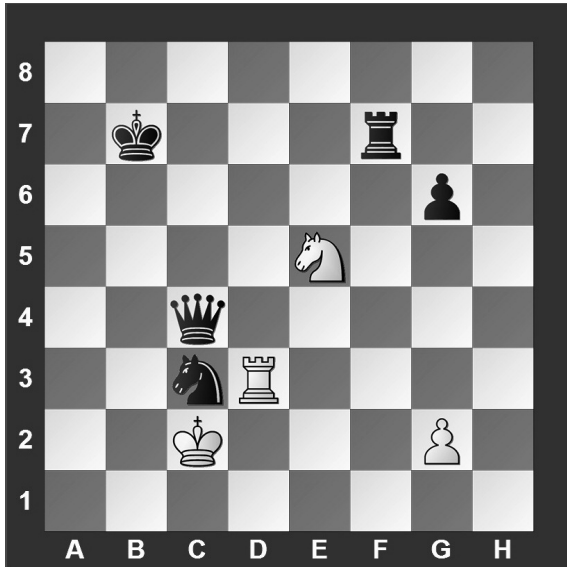
#8. Black to move



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

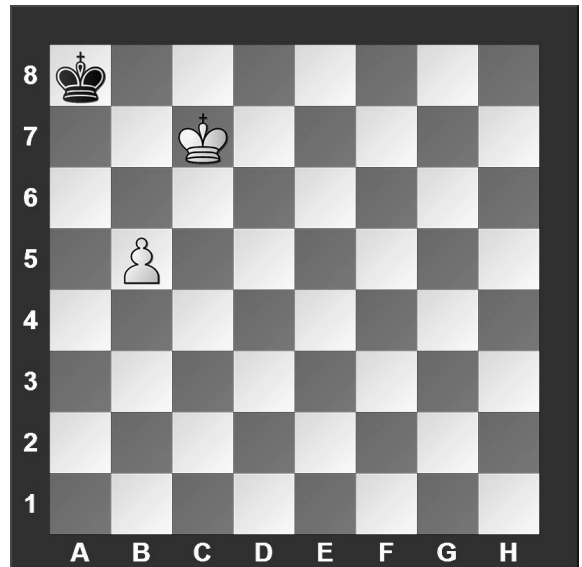
#9. White to move



What piece should White capture?

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

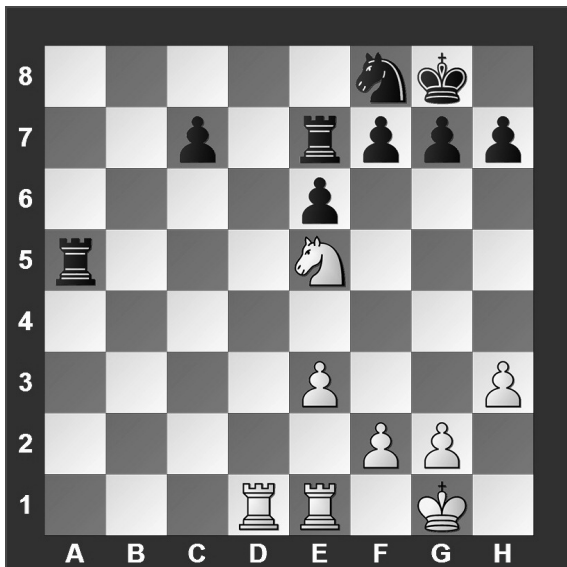
#10. White to move



What is White's best move?

- a) ♖b6
- b) b6
- c) ♖d8
- d) ♖d7

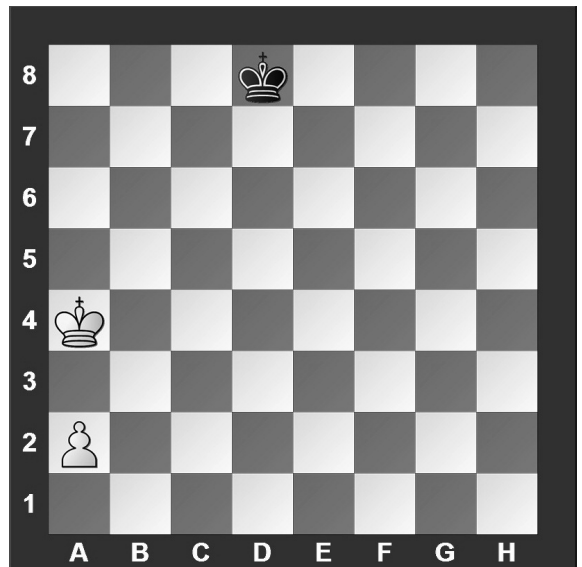
#11. White to move



What is White's best move?

- a) ♖xf7
- b) ♖g6
- c) ♖d8
- d) ♖c6

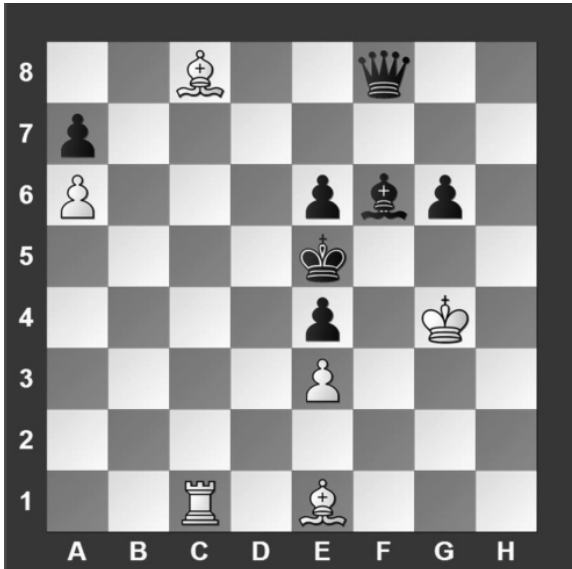
#12. White to move



What is the outcome of the game?

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

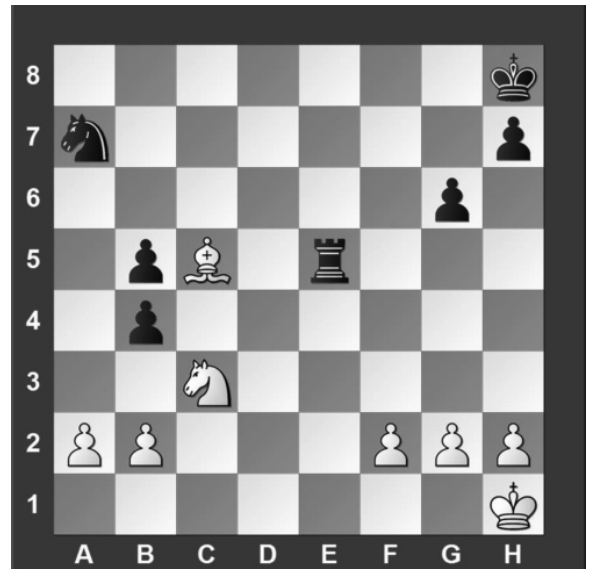
#13. White to move



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

- a) ♔c3
- b) ♔g3
- c) ♖c5
- d) ♔×e6

#14. White to move



What is White's best move?

- a) ♔d4
- b) ♔×a7
- c) ♔×b4
- d) ♘e2

#15. White to move



What is White's best move?

- a) f×e7
- b) ♘×c7
- c) f7
- d) g×f4

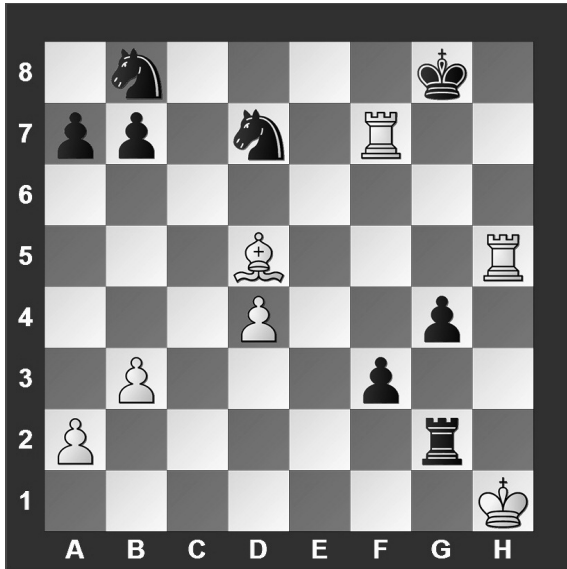
#16. White to move



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

- a) ♘f7
- b) c3
- c) ♖e2
- d) ♘g6

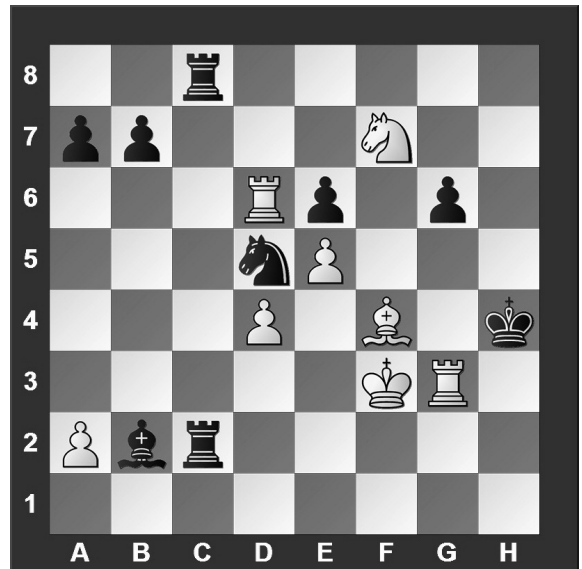
#17. White to move



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

- a) ♖h8
- b) ♖f8
- c) ♖×d7
- d) ♗×f3

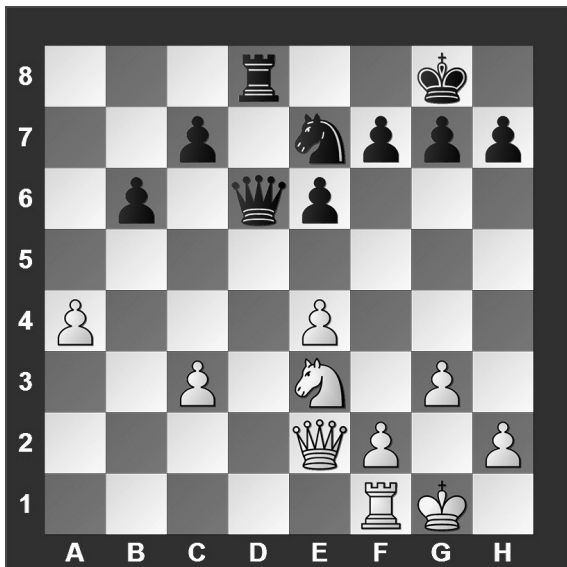
#18. White to move



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

- a) ♖h3
- b) ♖g4
- c) ♗g5
- d) ♖×d5

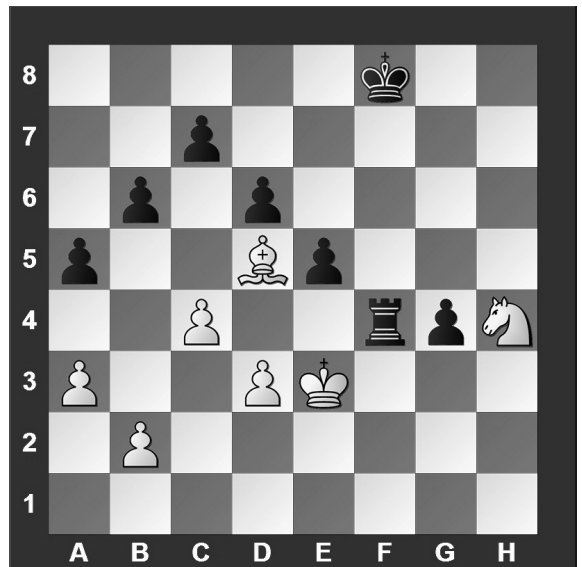
#19. White to move



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**

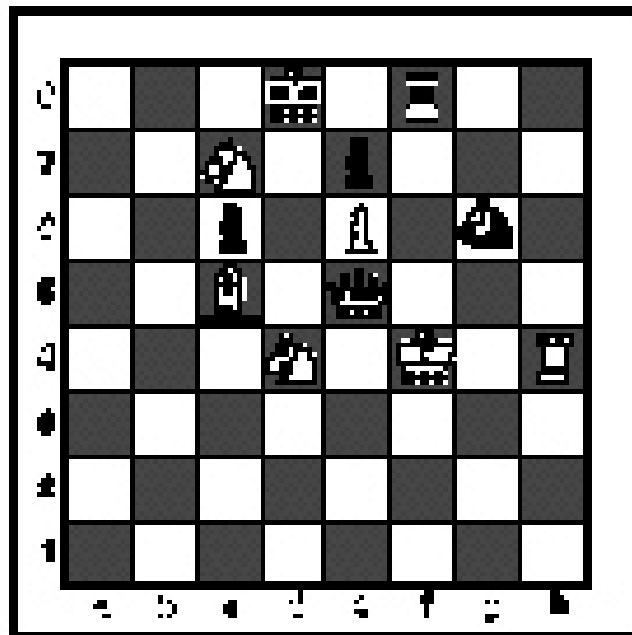
- |      |      |
|------|------|
| 1. D | 5. A |
| 2. A | 6. B |
| 3. C | 7. D |
| 4. B | 8. C |

**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

## TIEBREAKER - ALL GRADES

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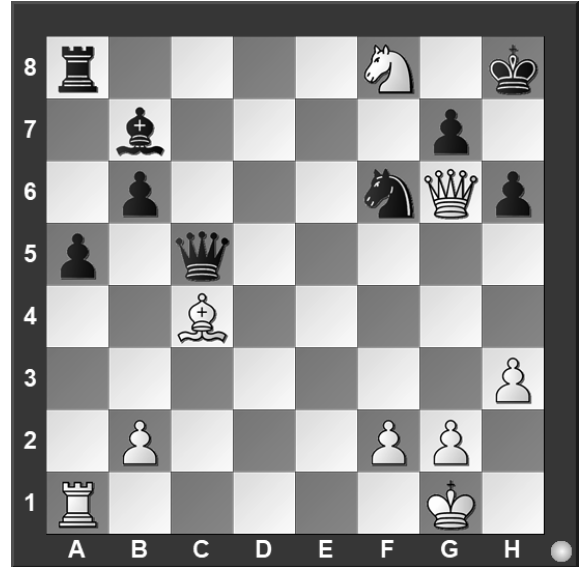
#1. White to move



What is White's best move?

- a) ♔b2
- b) ♘f7
- c) ♔×b6
- d) ♔×d8

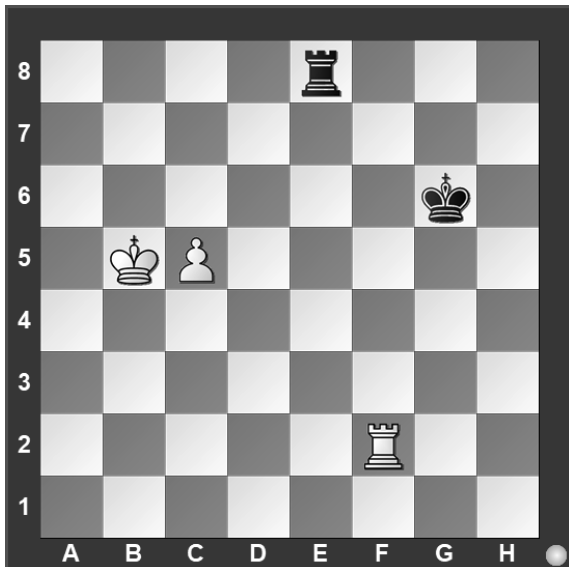
#2. White to move



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

- a) ♘e6
- b) ♔×g7
- c) ♔h7
- d) ♘d3

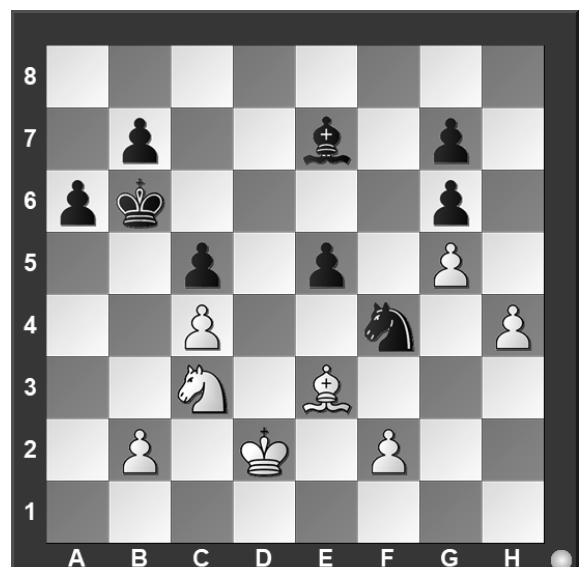
#3. White to move



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.

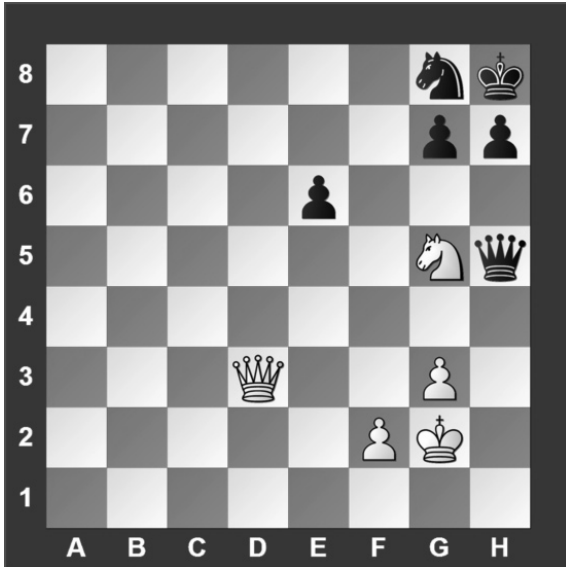
#4. White to move



What is White's best move?

- a) ♘×f4
- b) ♘d5
- c) ♘a4
- d) ♘e4

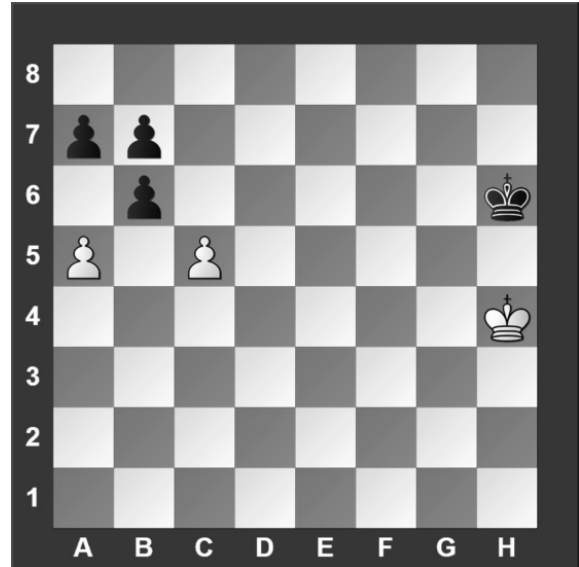
#5. White to move



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

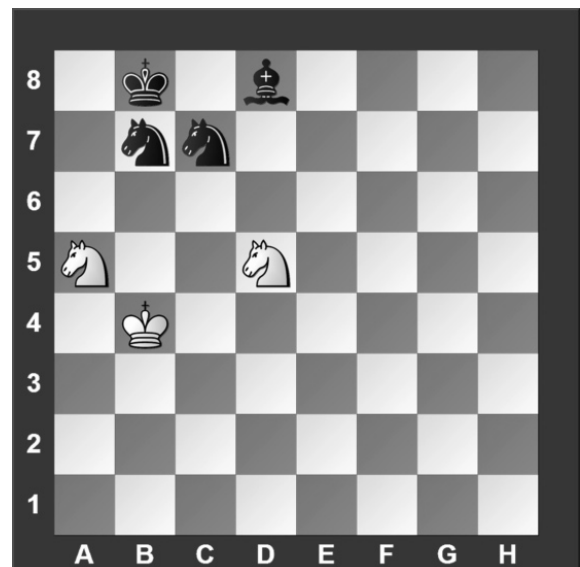
#7. White to move



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?

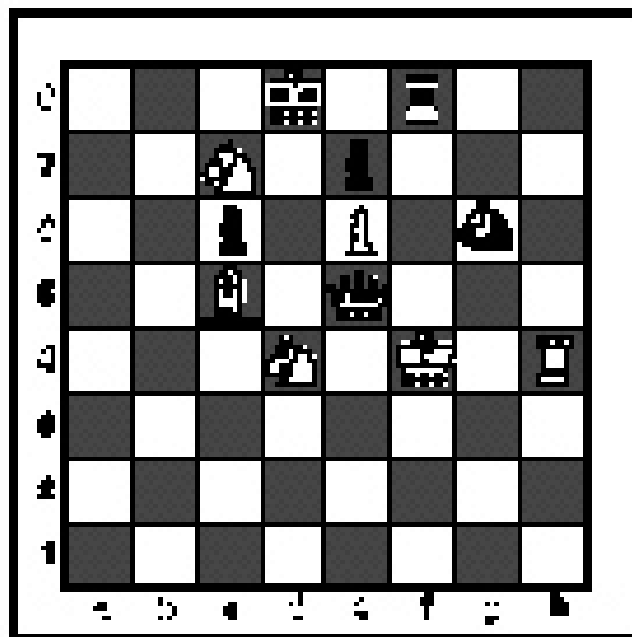
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**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

grades 6, 7, 8

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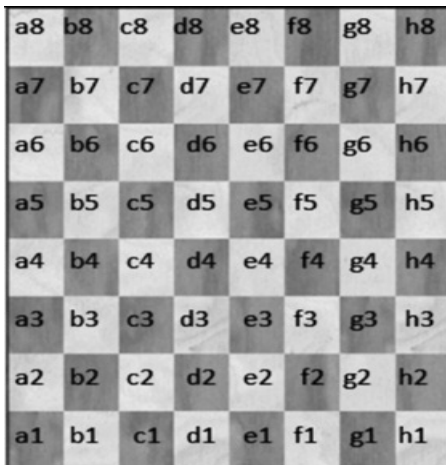
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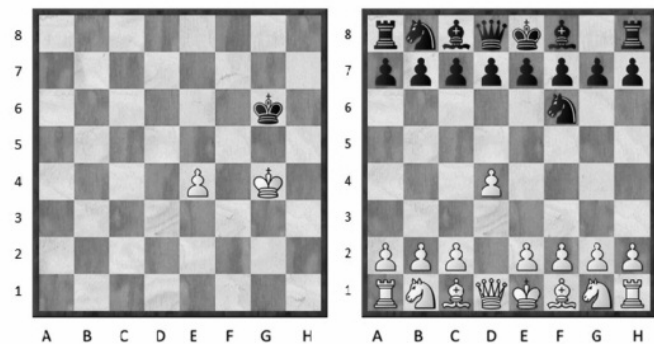
**a-h**

(We write the file it's on.)

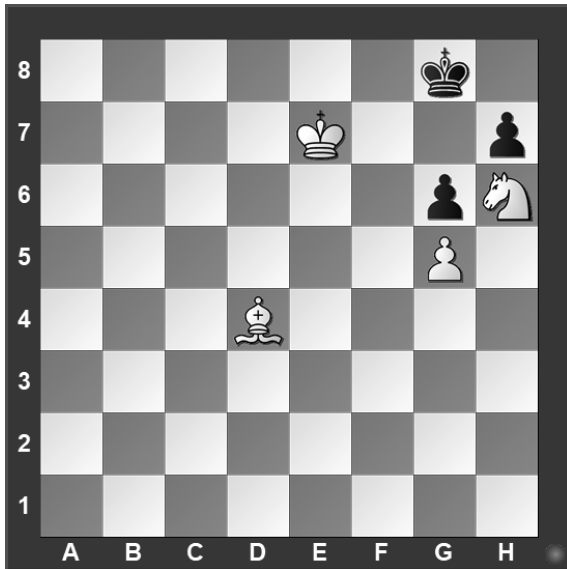
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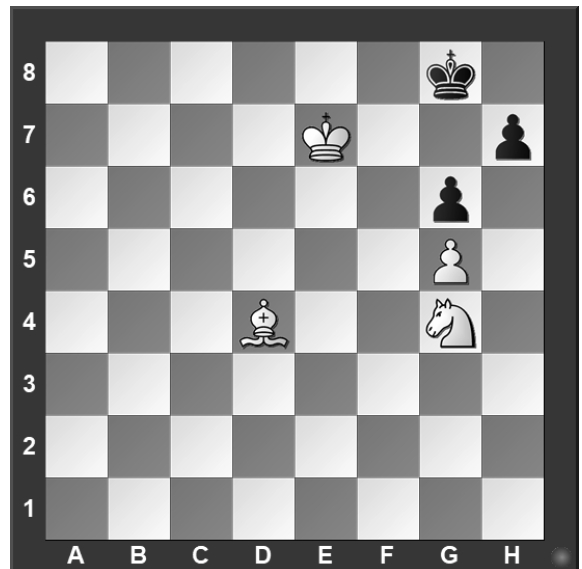
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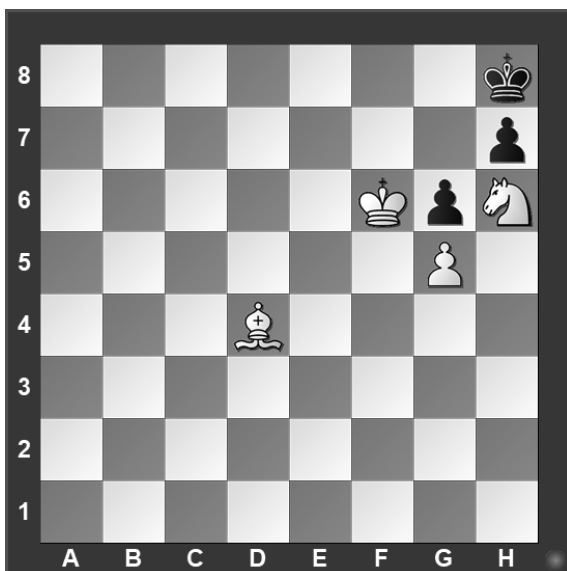
#2. Black to move



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#3. Black to move



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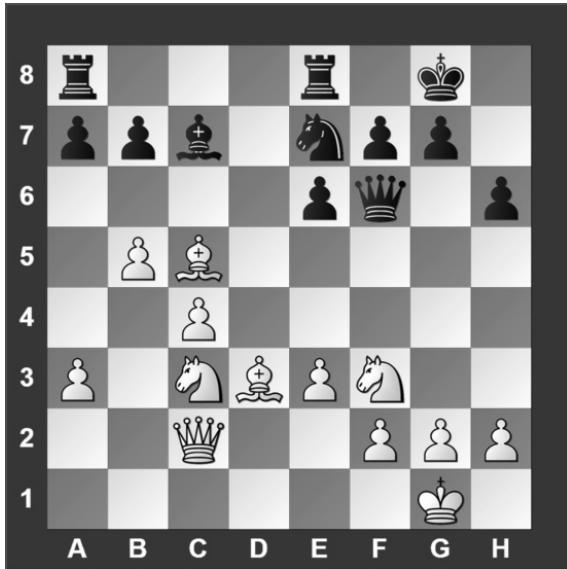
#4. White to move



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.

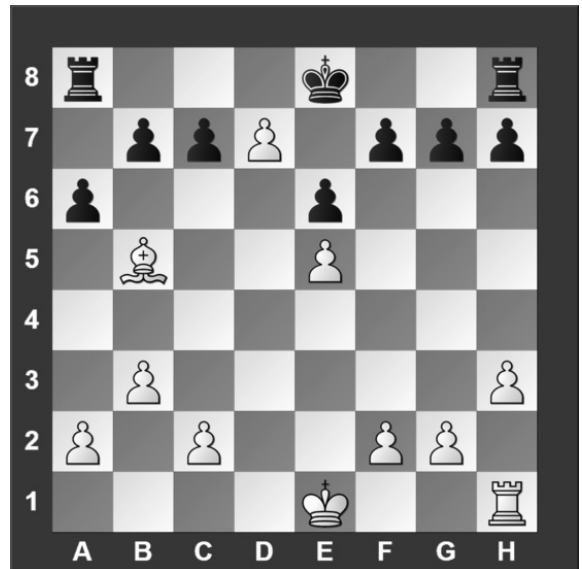
#5.



Which side has material advantage?

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- b) It is even.
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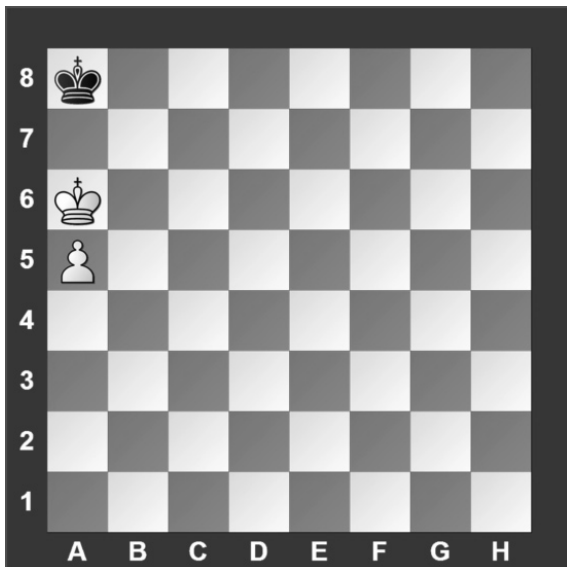
#6. White to move



Which move is possible for Black?

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

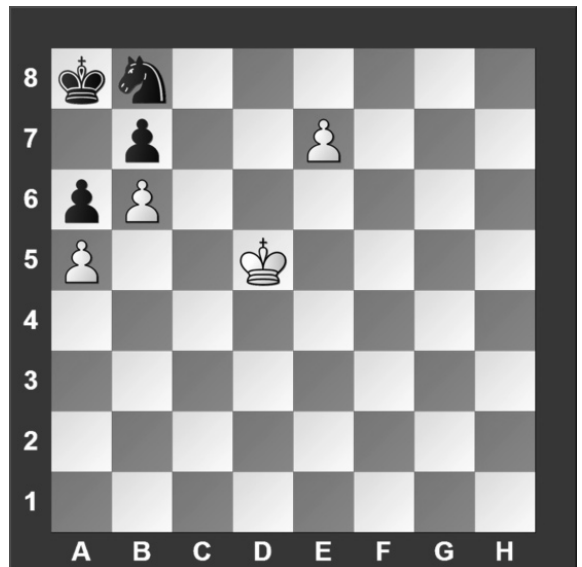
#7. White to move



What is the outcome of the game?

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

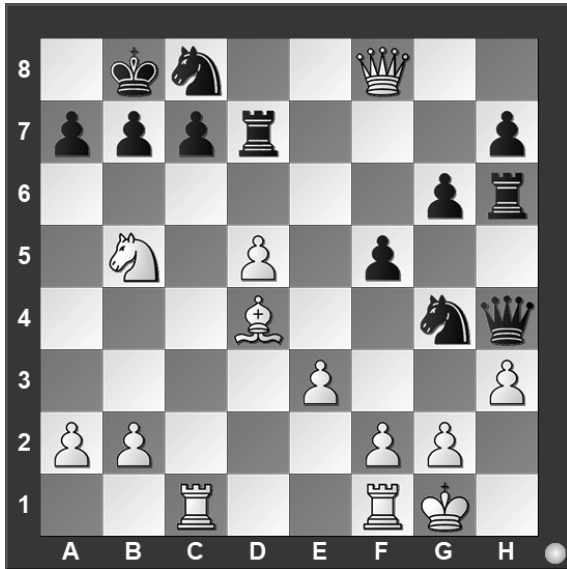
#8. White to move



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

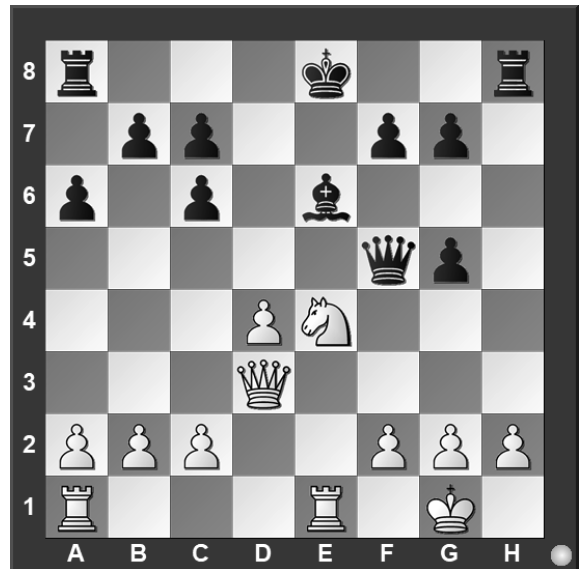
#9. White to move



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

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

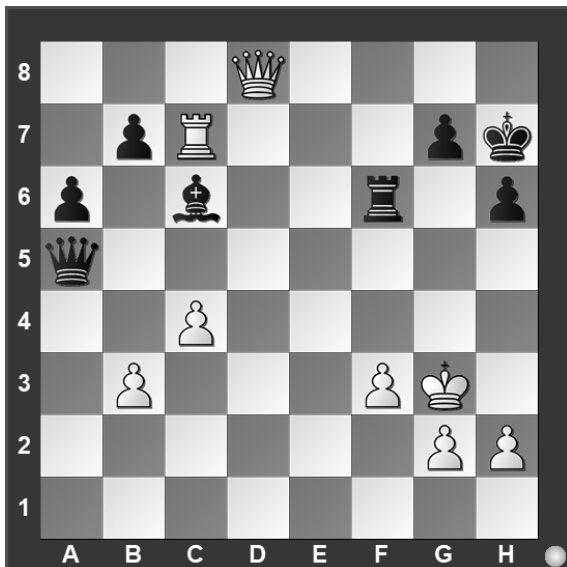
#10. White to move



What is White's best move?

- a) ♖d6
- b) ♖f6
- c) ♖g3
- d) c4

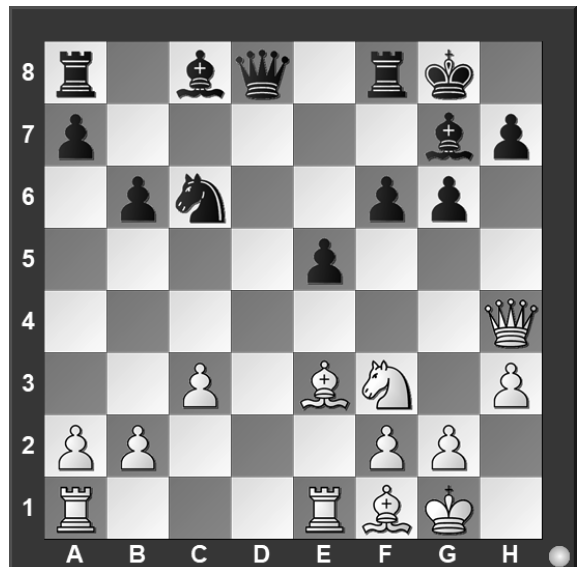
#11. White to move



What is White's best move?

- a) ♖e7
- b) ♖×f6
- c) ♖×g7
- d) ♖c8

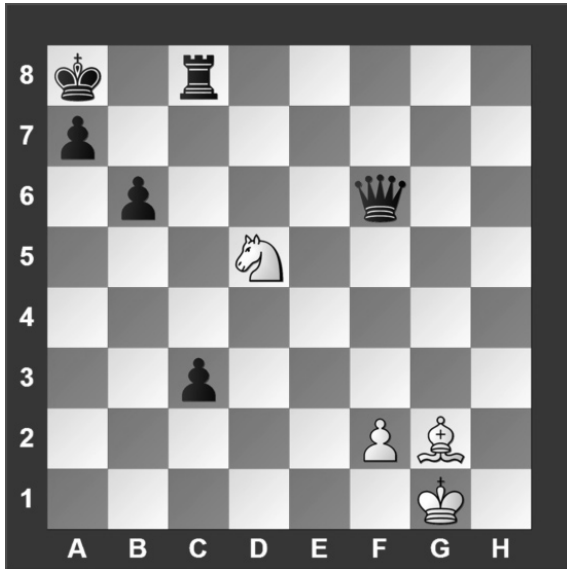
#12. White to move



What is White's best move?

- a) ♖c4
- b) ♖c4
- c) ♖ad1
- d) ♖b5

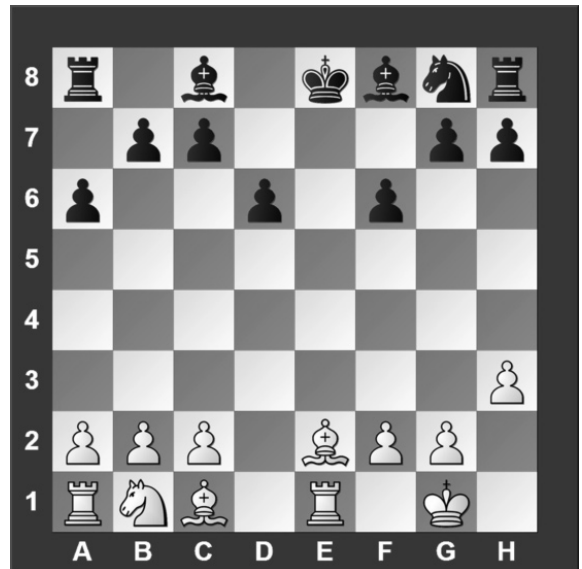
#13. White to move



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

- a) ♖×f6
- b) ♖×b6
- c) ♖c7
- d) ♖b4

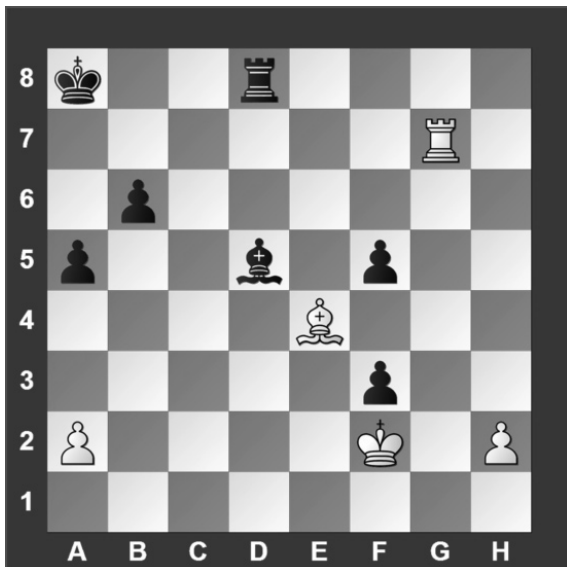
#14. White to move



What is White's best move?

- a) ♖h5
- b) ♖b5
- c) ♖c4
- d) ♖c3

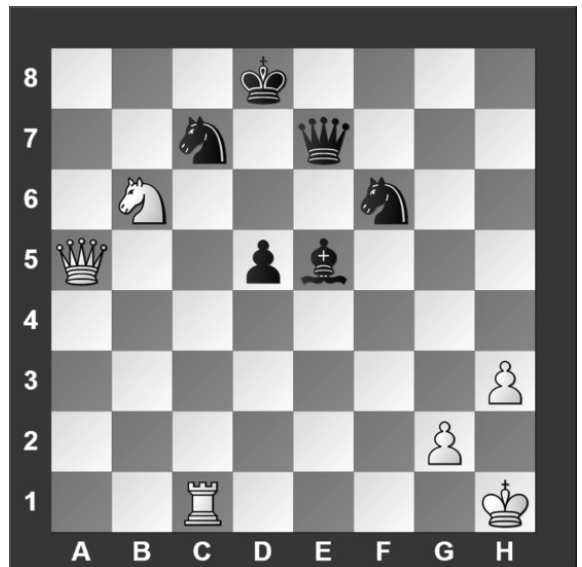
#15. White to move



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

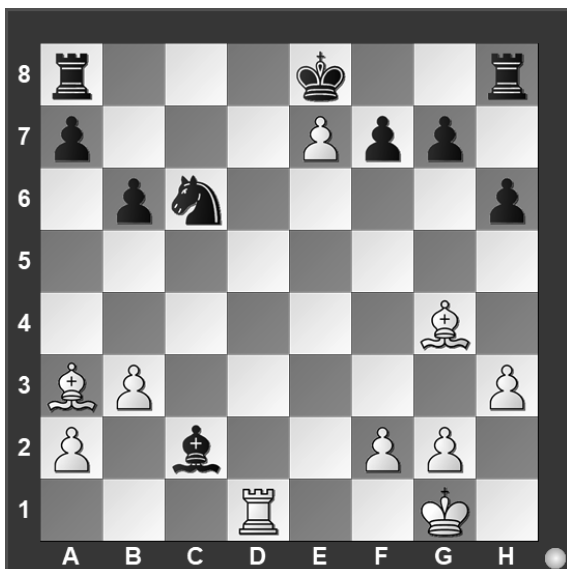
#18. White to move



What is White's best move?

- a) ♖f1
- b) ♗xh6
- c) ♗h2
- d) ♖bf1

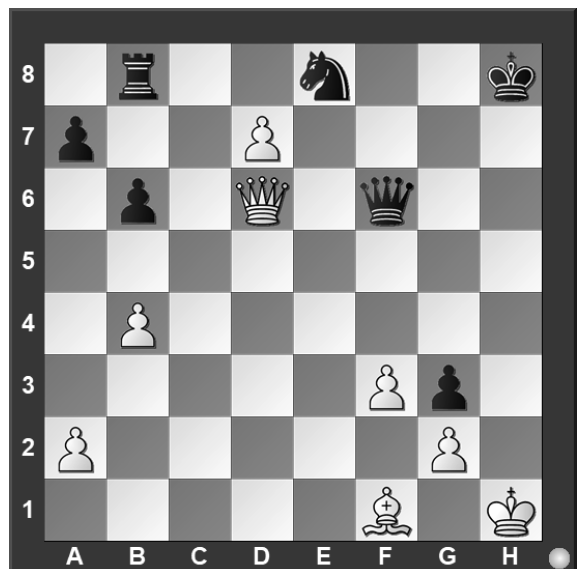
#19. White to move



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:****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

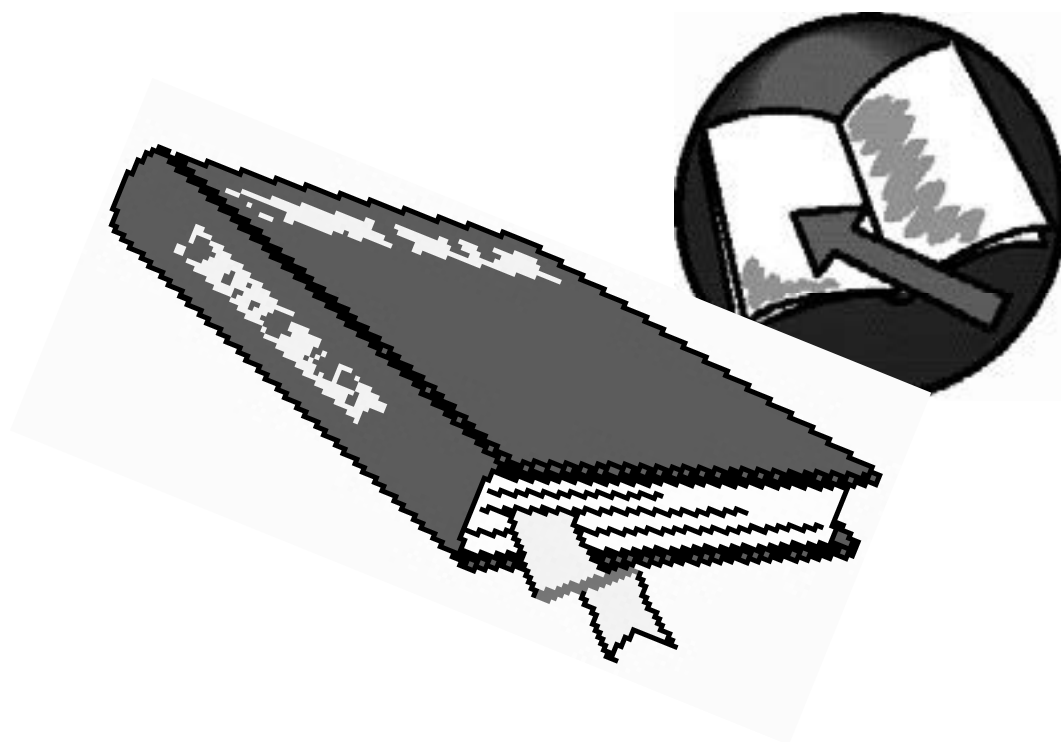
40.        A        B        C        D        E        F        G        H

**INVITATIONAL 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Dictionary Skills

grades 7 & 8

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

**University Interscholastic League  
2024-25 Dictionary Skills Contest  
Invitational District Test — Grades 7 & 8**

1. Aaron is feeling feeble today. What is he physically feeling?  
A. not hungry  
B. not tired  
C. not strong  
D. not focused
2. On what kind of vehicle would a barcarole be played?  
A. airplane  
B. boat  
C. chariot  
D. double-decker bus
3. The Renaissance was a period of European history between the \_\_\_\_\_ centuries?  
A. 14<sup>th</sup> and 17<sup>th</sup>  
B. 15<sup>th</sup> and 16<sup>th</sup>  
C. 13<sup>th</sup> and 16<sup>th</sup>  
D. 16<sup>th</sup> and 19<sup>th</sup>
4. Which of the following is a synonym for hangdog?  
A. lazy  
B. friendly  
C. exhausted  
D. guilty
5. Which of the following is NOT a book in the Hebrew Bible?  
A. Ezekiel  
B. Susanna  
C. Isaiah  
D. Ecclesiastes
6. Jennifer has indemnity on her brand-new pickup truck. What does she have?  
A. insurance  
B. car loan  
C. ownership paperwork  
D. up-to-date registration
7. What Native American tribe lived in longhouses?  
A. Apache  
B. Iroquois  
C. Inuit  
D. Comanche
8. In Greek mythology, Jason was successful in finding what mythical item?  
A. Sword of Damocles  
B. Ambrosia  
C. Hermes' winged sandals  
D. Golden Fleece
9. Jeep is a popular car brand in the United States based on World War II military vehicles. What popular comic strip duo inspired its name?  
A. Linus and Lucy  
B. Calvin and Hobbes  
C. Popeye and Olive Oyl  
D. Betty and Veronica

10. Which of these animals is most likely to make yowling sounds?  
A. cows  
B. camels  
C. cats  
D. chimpanzees
11. A football team is starting practice on Friday. The coach says the team is going to have a \_\_\_\_\_ match as a warmup.  
A. scrimshaw  
B. skirmish  
C. skimpy  
D. scrimmage
12. Which of the following animals is most similar to the dugong?  
A. manatee  
B. beaver  
C. whale  
D. panther
13. What do leeches mainly feed on?  
A. plants  
B. blood  
C. small insects  
D. mold spores
14. On a flower, where is the ovary located?  
A. at the center of the flower  
B. at the tips of the petals  
C. next to the anther  
D. on the stem
15. On which ocean is the city of Mogadishu located?  
A. Pacific  
B. Indian  
C. Atlantic  
D. Arctic
16. Mycorrhiza is the joining of \_\_\_\_\_ and \_\_\_\_\_?  
A. grass; weeds  
B. leaves; branches  
C. bushes; berries  
D. fungus; plant roots
17. A rod is a measurement of length, equal to \_\_\_\_\_ feet or \_\_\_\_\_ meters.  
A. 3; 0.91  
B. 16.5; 5.029  
C. 1; 0.034  
D. 5,280; 1,609
18. Jackdaws are generally \_\_\_\_\_ than crows?  
A. larger  
B. more colorful  
C. smaller  
D. stronger
19. In what country would you most likely find Nilotic people?  
A. Greece  
B. Turkey  
C. Egypt  
D. Italy
20. Vellum is typically used in what process?  
A. book binding  
B. carving sculptures  
C. polishing brass  
D. developing photographs

21. What part of the body does the sciatic nerve run down?  
A. back of the neck  
B. back of the arm  
C. back of the thigh  
D. back of the eyeball
22. What letter does a Saint Andrew's cross most resemble?  
A. T  
B. X  
C. V  
D. A
23. What does the Latin root of insult translate to?  
A. to tear down  
B. to leap upon  
C. to make haste  
D. to engage verbally
24. John is using an ISBN to help him find an item he needs while shopping online. What is he shopping for?  
A. a shirt  
B. a computer  
C. a book  
D. a toy
25. Mark is having trouble breathing, what condition does he have?  
A. myopia  
B. apoplexy  
C. dyspnea  
D. hypertension
26. Mr. Jones has a dilatory student in his class this year. What issue is the student having?  
A. not focused in class  
B. not showing up on time  
C. not getting good grades  
D. not turning in assignments
27. What is the metric equivalent to 264.17 gallons?  
A. kiloliter  
B. hectoliter  
C. dekaliter  
D. milliliter
28. One who has temerity is known to be \_\_\_\_\_?  
A. erudite  
B. religious  
C. meek  
D. reckless
29. What is the atomic number of fluorine?  
A. 9  
B. 33  
C. 21  
D. 18
30. What is the term for riding breeches that are loose above the knee and tight-fitting below?  
A. doublet  
B. jodhpur  
C. epaulet  
D. tabard

31. Every hair on your body has a sebaceous gland attached to it. Where is the sebaceous gland located on the hair?

- A. at the base of the root
- B. just below the epidermis
- C. at the center of the follicle
- D. at the end of the hair

32. What color is celandine?

- A. red
- B. blue
- C. purple
- D. yellow

\_\_\_\_\_ 33. nematocyst

A. fingerlike part at the back of the throat

\_\_\_\_\_ 34. Gruyere

B. tall yucca plant

\_\_\_\_\_ 35. hemlock

C. nutty-flavored cheese

\_\_\_\_\_ 36. uvula

D. the art of painting on plaster

\_\_\_\_\_ 37. ultrasonic

E. a striped and spotted cat

\_\_\_\_\_ 38. fresco

F. tiny stinging organ

\_\_\_\_\_ 39. tabby

G. vibrations that cannot be heard by the human ear

\_\_\_\_\_ 40. Joshua tree

H. poisonous plant



**University Interscholastic League  
2024-25 Dictionary Skills Contest  
Invitational Test — Grades 7 & 8**

**Answer Key**

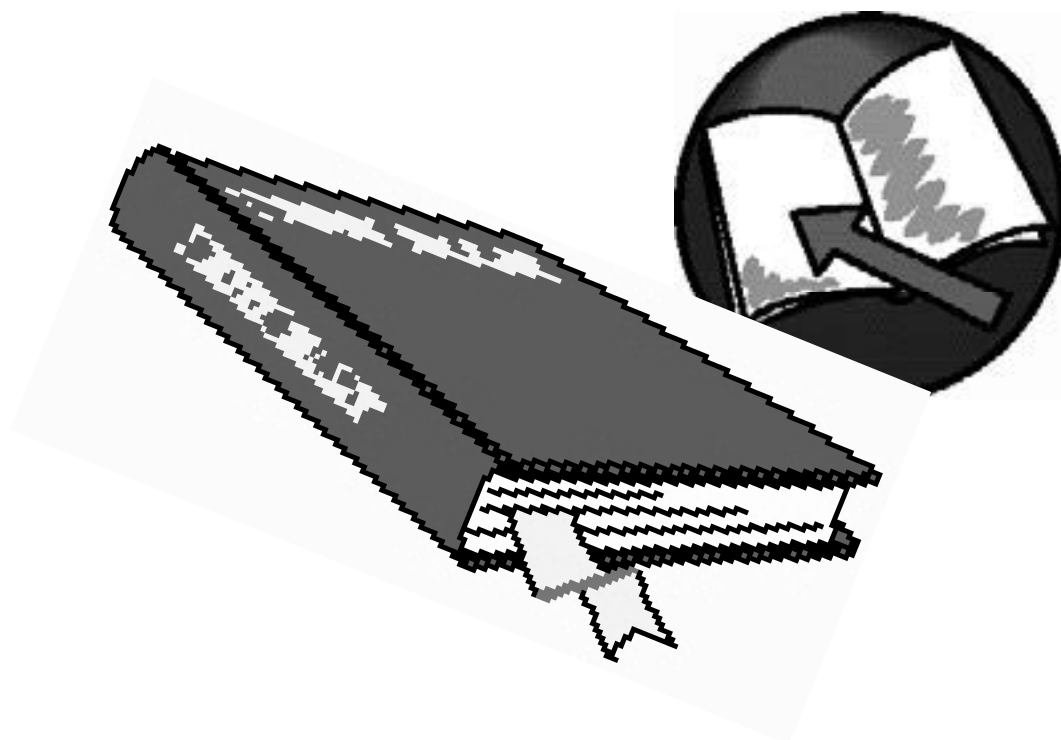
- |       |       |
|-------|-------|
| 1. C  | 21. C |
| 2. B  | 22. B |
| 3. A  | 23. B |
| 4. D  | 24. C |
| 5. B  | 25. C |
| 6. A  | 26. B |
| 7. B  | 27. A |
| 8. D  | 28. D |
| 9. C  | 29. A |
| 10. C | 30. B |
| 11. D | 31. B |
| 12. A | 32. D |
| 13. B | 33. F |
| 14. A | 34. C |
| 15. B | 35.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

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Dictionary Skills

grades 7 & 8

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

**University Interscholastic League  
2024-25 Dictionary Skills Contest  
Fall/Winter District Test — Grades 7 & 8**

1. What is the equatorial diameter of Neptune?  
A. 7,928 miles  
B. 88,865 miles  
C. 30,782 miles  
D. 4,222 miles
2. What country does tequila come from?  
A. Chile  
B. Brazil  
C. Argentina  
D. Mexico
3. In Greek mythology, what was Pygmalion's career?  
A. Sculptor  
B. Painter  
C. Blacksmith  
D. Storyteller
4. In what month does the United States celebrate Lincoln's Birthday?  
A. January  
B. February  
C. November  
D. December
5. Chorion is the outer membrane of what organ?  
A. appendix  
B. kidney  
C. liver  
D. placenta
6. What is the basic unit of money called in Jordan?  
A. peso  
B. dollar  
C. dinar  
D. yen
7. What shape do gloxinia flowers take?  
A. tear drop-shaped  
B. bell-shaped  
C. trumpet-shaped  
D. star-shaped
8. Sally doesn't want to pay back Charlie for the coffee he bought her last week. What verb best describes her behavior?  
A. to repulse  
B. to requite  
C. to repudiate  
D. to rescind
9. Which of the following is NOT a synonym of aegis?  
A. protection  
B. vocation  
C. defense  
D. patronage

10. How many minims are equivalent to a fluid dram?  
A. 20  
B. 40  
C. 60  
D. 80
11. The Canadian flag is commonly known as the Maple Leaf Flag. What is the state flag of the United Kingdom called?  
A. il Tricolore  
B. Union Jack  
C. federal cross  
D. Stars and Stripes
12. In Manhattan, where is Greenwich Village located?  
A. lower west side  
B. upper east side  
C. lower east side  
D. upper west side
13. In what sport would a player need to tag up?  
A. football  
B. tennis  
C. lacrosse  
D. baseball
14. What is the English translation for the Greek root of nausea?  
A. stomach  
B. ship  
C. summer  
D. swallow
15. What kind of animal is a grebe?  
A. lizard  
B. snake  
C. bird  
D. fish
16. Which of the following vitamins is needed to aid in blood clotting properly?  
A. vitamin A  
B. vitamin C  
C. vitamin E  
D. vitamin K
17. In the zodiac, what number is associated with Leo?  
A. 3  
B. 4  
C. 5  
D. 6
18. What does the V stand for in VFW?  
A. Volume  
B. Voltage  
C. Veterans  
D. Victory
19. What kind of person is most likely to wear a chasuble?  
A. butler  
B. priest  
C. hockey player  
D. police officer
20. Where in the United States did the word tuxedo come from?  
A. California  
B. Texas  
C. New York  
D. Florida

21. A gentle breeze can sometimes be known as a \_\_\_\_?
- A. zephyr
  - B. zebu
  - C. zinnia
  - D. zeppelin
22. What household object commonly contains krypton?
- A. microwave oven
  - B. electric lamp
  - C. clothes iron
  - D. ceiling fan
23. Which of the following is a levator?
- A. bread yeast
  - B. safety pin
  - C. high-heeled shoe
  - D. bicep muscle
24. The fruit with black seeds that grows on tropical American trees is called \_\_\_\_?
- A. pansy
  - B. palmer
  - C. papaya
  - D. pampa
25. Tracy just injured her cornea. Where is the cornea located on the eye?
- A. behind the eye
  - B. on the outermost layer
  - C. under the lower eyelid
  - D. in the center of the eyeball
26. Mrs. White has amassed a small fortune. Her fortune has \_\_\_\_ over time.
- A. accorded
  - B. accustomed
  - C. acidified
  - D. accumulated
27. What is the atomic number of iron?
- A. 89
  - B. 50
  - C. 26
  - D. 12
28. Paradichlorobenzene is used in what pest control product?
- A. flea collar
  - B. moth balls
  - C. mouse traps
  - D. bug spray
29. What is the Roman Numeral for the Arabic number 400?
- A. CM
  - B. XC
  - C. CD
  - D. LX
30. What ancient culture gave the name Junius to the first month of summer, that the English later translated to June?
- A. Romans
  - B. Egyptians
  - C. Aztecs
  - D. Indus
31. Jamie is in line to buy a new t-shirt. What is he doing?
- A. quibbling
  - B. queuing
  - C. querying
  - D. quarreling

32. How many carbon and oxygen atoms each does ribose have?

A. 2

C. 4

B. 3

D. 5

\_\_\_\_\_ 33. ephemeral

A. six lines of poetry

\_\_\_\_\_ 34. royal jelly

B. jawless fishes

\_\_\_\_\_ 35. wireworm

C. substance made by bees

\_\_\_\_\_ 36. sestet

D. shield-shaped surface

\_\_\_\_\_ 37. lanolin

E. intoxicated

\_\_\_\_\_ 38. escutcheon

F. sheep byproduct used in cosmetics

\_\_\_\_\_ 39. inebriated

G. lasting a short time

\_\_\_\_\_ 40. lamprey

H. larva destructive to plant roots

**University Interscholastic League  
2024-25 Dictionary Skills Contest  
Fall/Winter Test — Grades 7 & 8**

**Answer Key**

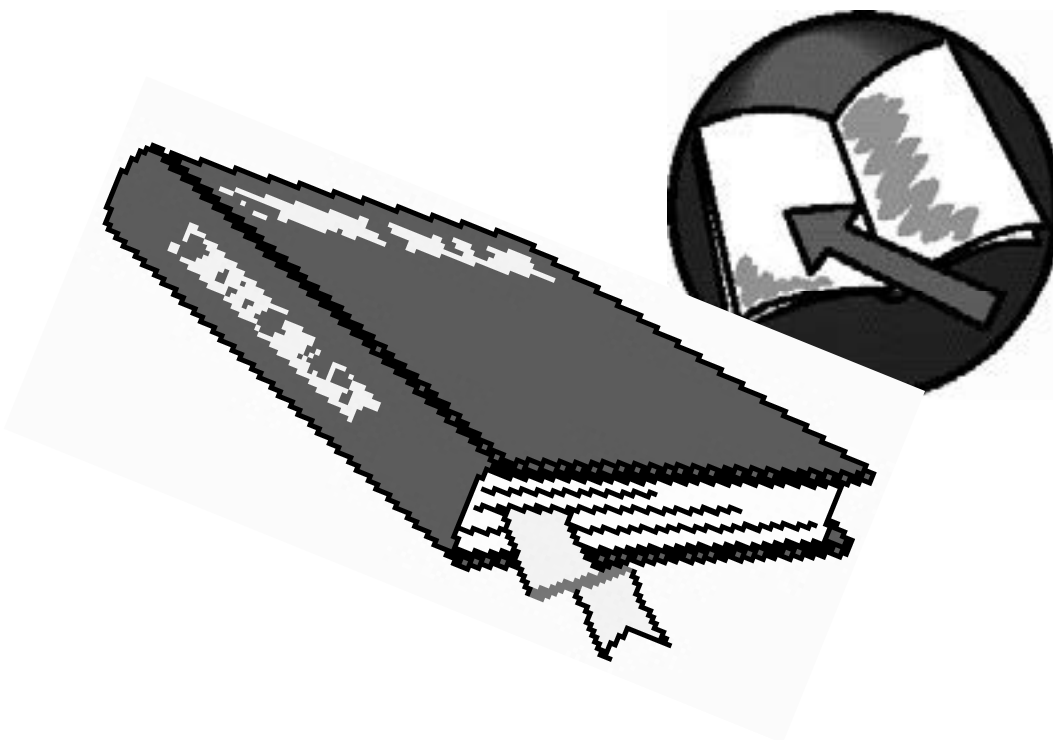
- |       |       |
|-------|-------|
| 1. C  | 21. A |
| 2. D  | 22. B |
| 3. A  | 23. D |
| 4. B  | 24. C |
| 5. D  | 25. B |
| 6. C  | 26. D |
| 7. B  | 27. C |
| 8. C  | 28. B |
| 9. B  | 29. C |
| 10. C | 30. A |
| 11. B | 31. B |
| 12. A | 32. D |
| 13. D | 33. G |
| 14. B | 34. C |
| 15. C | 35.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

**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Dictionary Skills

grades 7 & 8

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



**University Interscholastic League  
2024-25 Dictionary Skills Contest  
Spring District Test — Grades 7 & 8**

1. What kind of fish is a black crappie?  
A. lungfish  
B. sunfish  
C. redfish  
D. whitefish
2. In the ear, where is the auditory canal located?  
A. behind the eardrum, leading to the sinuses  
B. below the eardrum, in the skull  
C. in front of the ear drum, leading to outside the ear  
D. next to the cochlea, beside the auditory nerve
3. Which of the following is a compound used to stimulate the nervous system?  
A. histamine  
B. scopolamine  
C. melatonin  
D. amphetamine
4. From which language do we derive the feeling of déjà vu?  
A. French  
B. German  
C. Arabic  
D. Portuguese
5. On what day is Canadian Thanksgiving Day typically celebrated?  
A. the fourth Thursday in November  
B. the first Tuesday in December  
C. the second Monday in October  
D. the third Wednesday in September
6. In Greek mythology, who did Perseus slay?  
A. The Nemean Lion  
B. Medusa  
C. The Minotaur  
D. Cronus
7. What body system is made up of the alimentary canal?  
A. endocrine system  
B. integumentary system  
C. circulatory system  
D. digestive system
8. Which of the following is the membrane that lines the uterus?  
A. endometrium  
B. retina  
C. pleura  
D. meninx
9. The \_\_\_\_\_ plant is considered a weed in the southeastern United States.  
A. raffia  
B. liana  
C. kudzu  
D. spirogyra

10. What is the former name of Ho Chi Minh City?  
A. Peking  
B. Saigon  
C. Bombay  
D. Edo
11. What sport is most likely to have players concerned about icing?  
A. soccer  
B. lacrosse  
C. cricket  
D. hockey
12. What is the metric equivalent of 3.94 inches?  
A. millimeter  
B. micrometer  
C. centimeter  
D. decimeter
13. What is another name for the American chameleon?  
A. marine iguana  
B. green anole  
C. Gila monster  
D. leopard gecko
14. In the ancient Roman calendar, what month was December?  
A. eighth  
B. ninth  
C. tenth  
D. eleventh
15. Which of the following is the study of proper names?  
A. mycology  
B. ergonomics  
C. morphology  
D. onomastics
16. The eohippus had \_\_\_\_\_ toes on each front leg and \_\_\_\_\_ toes on each rear leg.  
A. five; five  
B. two; four  
C. four; three  
D. two; two
17. Hannah works as a CPA. What is her job?  
A. accountant  
B. attorney  
C. architect  
D. archaeologist
18. What is the proper color name for a bright reddish orange?  
A. ecru  
B. alabaster  
C. gossamer  
D. vermilion
19. Which of the following is a synonym for deportment?  
A. sector  
B. behavior  
C. minimize  
D. prevent
20. From what two languages do we derive the word delicatessen?  
A. Latin and Greek  
B. Spanish and Portuguese  
C. Swedish and Icelandic  
D. French and German

21. James and Brad are both feeling very bellicose. What are they about to do?  
A. fight  
B. laugh  
C. run  
D. eat
22. When a bell rings on a ship 6 times, what time is it indicating?  
A. 4:00 pm  
B. 5:00 pm  
C. 6:00 pm  
D. 7:00 pm
23. The United States issues a census decennially. How often do they take the census?  
A. every five years  
B. every ten years  
C. every other year  
D. every eighteen months
24. Which of the following birds is named after the sound they make?  
A. waxwing  
B. wren  
C. whip-poor-will  
D. white-throated sparrow
25. How is the number sixty (60) notated in Roman numerals?  
A. LX  
B. CD  
C. XV  
D. MM
26. What is the English translation of the original French meaning of lieutenant?  
A. person in charge  
B. acting in place of another  
C. second-in-command  
D. strong leader
27. What is the indigenous tribe found in Michigan called?  
A. Navajo  
B. Apache  
C. Cherokee  
D. Ojibwa
28. In the heart, where is the aorta located?  
A. below the right atrium  
B. right above the left ventricle  
C. in the center of the heart  
D. at the top of the heart
29. What figures are used in a Rorschach test?  
A. clocks  
B. ink blots (two words)  
C. children's drawings  
D. colored numbers
30. What is the atomic weight of sulfur?  
A. 32.07  
B. 95.94  
C. 40.078  
D. 91.224
31. What color is chinchilla fur?  
A. light amber  
B. pale cream  
C. pearly gray  
D. medium brown

32. Which of the following is an enlargement of the thyroid gland?

A. goiter

C. lymphoma

B. nephritis

D. hypoglycemia

\_\_\_\_\_ 33. Precambrian

A. flexible

\_\_\_\_\_ 34. lissome

B. a unit of work or energy

\_\_\_\_\_ 35. connubial

C. colonial insects

\_\_\_\_\_ 36. functionary

D. appetizers

\_\_\_\_\_ 37. hymenopteran

E. earliest era of geological history

\_\_\_\_\_ 38. kilowatt-hour

F. someone who works for the government

\_\_\_\_\_ 39. hors d'oeuvre

G. crystallized quartz

\_\_\_\_\_ 40. amethyst

H. relating to marriage

**University Interscholastic League  
2024-25 Dictionary Skills Contest  
Spring Test — Grades 7 & 8**

**Answer Key**

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



# Editorial Writing Evaluation Sheet

\_\_\_\_\_  
*contestant #*

*In order to make this a complete learning experience, judges are asked to complete the evaluation sheet for students.*

	FAIR	GOOD	EXCELLENT
The situation or problem is explained in the first two or three paragraphs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The writer takes an obvious stance in the first few paragraphs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The writer supports the stance through specific examples.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The writer presents a logical solution or conclusion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What were the strong points of the editorial?

What were the weak points of the editorial?

What suggestions do you have for improvement?

Judge's Signature \_\_\_\_\_



\_\_\_EDITORIAL WRITING

Each judge should use a copy of this form to rank each contestant's entry. Refer to the *Constitution and Contest Rules* or *Evaluation Sheet* for the criteria used to evaluate each contest.

**SITE** \_\_\_\_\_

DATE \_\_\_\_\_

GRADE	2	3	4	5	6	7	8
-------	---	---	---	---	---	---	---

## CONTESTANT

**JUDGE**

NUMBER/CODE

**TITLE OF COMPOSITION**

**RANK****PLACE WINNER\***[illegible]

\* **PLACE WINNER** indicates the final ranking (first through sixth place) of the contestants if several judges evaluate the papers.

**Judge's signature**\_\_\_\_\_



# Editorial Writing

A+ INVITATIONAL • 2024-2025

**You are a reporter for the Leaguetown Press, the student newspaper of Leaguetown Middle School. From the given information, write an editorial as you would for the middle school newspaper. Remember that as an editorial writer you should support or oppose policy or action; you should not sermonize.**

**You have 45 minutes.**

**Do not write your name or the name of your school on this sheet or entry. Put your number in the upper right corner of each page of your entry.**

## STATEMENT OF SITUATION

Leaguetown Middle School has 1,660 students and is located in West Texas. Last month, Principal Logan Reynolds announced a proposal to ban cell phone use during classroom instruction. He created the proposal after a poll revealed 76% of staff felt frustration over time spent monitoring phone use rather than teaching.

"In the past few years, we've seen an increase in students using phones during class, whether it's for texting, social media or even gaming," Reynolds said. "We want a focused learning environment, free from distraction. Phones can be helpful, but they are hurting each student's ability to learn."

The ban would require students to leave their phones in lockers during the school day. Phones would only be allowed in case of emergencies or designated breaks. Counselor Alysia Calpur said she supports the ban because of mental health effects of constant phone use.

"Many students face anxiety because of what's happening online, whether it's bullying or social expectations" Calpur said. "Putting their phone down can help get rid of some of the stress."

. Seventh grader Ashley Cano said the proposal is too harsh.

"In this day and age, everything is online—even our assignments," Cano said. "Sometimes I have to scan a QR code for an assignment or Google something for a project. And what if I can't reach my parents? I can't imagine how worried my mom would be if I don't respond to her messages right away. Phones aren't just for fun. They're also for safety."

The school board will vote on the proposal at its Nov. 4 meeting and will take effect next month if approved. You are writing for the issue of *The Press* to be distributed Friday, Nov. 1.

## STANCES

### Supporting

Banning cell phones during class promotes focus and reduces unnecessary distractions, like social media and texting, that impede learning. The proposal would help student mental health and still allow them to access their phone in a locker if an emergency happens. Without phones, students are encouraged to engage in class instruction.

### Opposing

Middle school students should be trusted with phone use during school hours. Banning cell phones overlooks their educational benefits and ease for communication in emergencies. Phones are important for research, accessing assignments and contacting parents. Instead of banning phone use, teachers should have structured times for phone access to benefit from technology without disrupting class.





# Editorial Writing

A+ Fall/Winter District • 2024-2025

**You are a reporter for the Leaguetown Press, the student newspaper of Leaguetown Middle School. From the given information, write an editorial as you would for the middle school newspaper. Remember that as an editorial writer you should support or oppose policy or action; you should not sermonize.**

**You have 45 minutes.**

**Do not write your name or the name of your school on this sheet or entry. Put your number in the upper right corner of each page of your entry.**

## STATEMENT OF SITUATION

Leaguetown Middle School has 1,830 students enrolled in grades 6, 7 and 8 and is located in East Texas. After receiving complaints from staff on students' excessive use of slang during the school day, Principal Annabeth Jackson announced a policy last week where students will receive consequences if caught using slang during class time.

Under the new policy, students will first receive a warning if caught using slang words. If the behavior continues, a one-day in-school suspension will be issued.

"Slang can be fun, but it has become a significant distraction," Jackson said. "Our priority is to create an environment conducive to learning. We want to ensure our students are practicing clear, formal communication. These words may seem harmless, but they're taking away from valuable learning time."

English teacher Ronald Wood said he supports the new measures and has been frustrated at the constant use of slang during class discussion.

"In the middle of a discussion about our class novel, I'll hear students saying things like 'That's so skibidi' or 'Bro has rizz,' and it gets everyone off track," Wood said. "It's not just about the words themselves, but the atmosphere it creates. Students don't take the lesson seriously."

Students and parents have created a petition to remove this policy. Eighth-grader Rachel Grace said she thinks the consequences are unnecessary.

"Everyone knows when to be serious and when it's OK to joke around," Grace said. "It's like they want us to act like robots. Sometimes saying something like 'skibidi' just makes the day more fun. Now I have to worry about getting in trouble for it."

The school board will vote on removing the policy after students and parents present their argument at their Dec. 2 meeting. You are writing for the issue of The Press to be distributed Friday, Nov 29.

## STANCES

### Supporting the decision to ban slang from the school day

The district should keep the policy because it teaches students clear communication skills while keeping students on-task without disruption during instructional time. Consequences will keep students from using inappropriate slang. Without these consequences, students will continue to act out with words during unsuitable times, causing further distraction and frustration among teachers.

### Opposing the decision to ban slang from the school day

Students should be trusted to know the right place and time for using slang. Excessive consequences can create unnecessary tension, and the policy hinders a student's right to self-expression. Instead of presenting harsh consequences, the school should encourage an open discussion about language and being respectful in a professional environment.



# Editorial Writing

**A+ SPRING DISTRICT • 2024-2025**

**You are a reporter for the Leaguetown Press, the student newspaper of Leaguetown Middle School. From the given information, write an editorial as you would for the middle school newspaper. Remember that as an editorial writer you should support or oppose policy or action; you should not sermonize.**

**You have 45 minutes.**

**Do not write your name or the name of your school on this sheet or entry. Put your number in the upper right corner of each page of your entry.**

## STATEMENT OF SITUATION

Leaguetown Middle School is located in Central Texas and has an enrollment of 650 students in grades 6, 7 and 8.

After surveying parents and school staff in the district, Superintendent Bradley Winston proposed that the district adjust the school calendar to expand winter break by three weeks. If the proposal is adopted for the fall of 2025, students would start school July 21 and first semester would end Nov. 21, the Friday before Thanksgiving. Students would not return to school until Jan. 5, giving schools six weeks off for winter break. Second semester dates would not change and the last day of school would be May 22, 2026.

In addition, the bell schedule would need to be adjusted to fulfill the required number of instructional minutes required by the state. The school board will vote on whether to approve his proposal at their meeting Monday.

"It is increasingly difficult to maintain student engagement in the month of December," Winston said. "It's often cold. We have more potential for severe weather in December. So I thought, maybe we should just give students those weeks off to recuperate from first semester. Then they can come back in January refreshed and ready to learn."

Eighth grade Math teacher Ana Brown said she is concerned that with the proposed calendar, students could forget too much of the material on an extended break.

"We typically see a bit of learning loss over the summer," Brown said. "We spend the first few weeks of every school year reviewing what students learned the year before. If we have a huge break in the middle of the year, we'll have to throw away two more weeks to review first semester. This plan will waste more time than it will save."

Seventh grader Anika Shah said she would love to have more time off in the month of December.

"The new schedule would be a great opportunity for my family to travel and spend time together," she said. "It would be nice to be able to spend holidays with family and still be able to have a break and relax. I'm not sure who would take care of my first grade brother while my mom is at work all day, though."

Whichever way the board votes, Winston said something needs to change to keep students engaged in school during the end of first semester.

"We see a lot of class parties and more absences," he said. "If we don't change the calendar, we're going to have to take a serious look at changing some other policies."

## STANCES

### Supporting

Students deserve an extended break after first semester. Classes are stressful. Students are becoming more burned out between homework, school and extracurriculars. Having more time off between first and second semester would improve student engagement in school and improve student mental health. Teachers could also use that additional time to plan and still have a break.

### Opposing

Having too much of a break between first and second semester could cause students to forget part of what they learned during first semester. Consistent practice is important to retain new information and skills. In addition, parents would have to spend money on additional childcare during the extended time off. Not all families will be able to afford this. It makes more sense for surrounding schools to be on the same calendar.



# Impromptu Speaking

## EVALUATION SHEET

### INSTRUCTIONS

Contestants should be evaluated and ranked based on effectiveness of delivery, organization of ideas and the overall impression of the speech. Students draw three topics and have three minutes to prepare a speech. The maximum time limit for speaking is five minutes. There is no minimum time limit. Topics may be serious or humorous in nature. Note cards may not be used during the presentation. 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. Judging decisions are an individual responsibility.

**Speaker Number** \_\_\_\_\_

**Speaker Name** \_\_\_\_\_

**Section** \_\_\_\_\_

**Topic** \_\_\_\_\_

### CRITERIA

Evaluate the contestant in each category. Do NOT total these numbers to determine rank in the round. They are only designed to give the contestant an indication of strengths and weaknesses.

QUESTION	NEEDS WORK		GOOD	SUPERIOR	
1. Was the presentation organized clearly and effectively?	1	2	3	4	5
2. Was the speaker's delivery smooth and articulate?	1	2	3	4	5
3. Did the student have adequate eye contact?	1	2	3	4	5
4. Did the student have a creative approach to the topic?	1	2	3	4	5
5. Was the speaker poised and confident?	1	2	3	4	5
6. Did the speaker have vocal variety?	1	2	3	4	5
7. Was the speaker interested and enthusiastic?	1	2	3	4	5
8. Did the speaker communicate with the audience?	1	2	3	4	5

### WRITTEN EVALUATION

Comments should be constructive and supportive.

*Judge's signature* \_\_\_\_\_



## A+ IMPROMPTU SPEAKING TOPICS

2024-2025 Invitational

### PRELIMINARY ROUND

1. Music makes me feel...
2. The famous person I wish I could have dinner with...
3. If I could build my own furniture...
4. The best party I ever attended...
5. A movie I could watch over and over again...
6. A city I want to move to...
7. My favorite kind of exercise...
8. A goal I have for the future...
9. Someday my generation will...
10. Creativity means...
11. When I get stressed, I like to relax by...
12. A tradition my family has...
13. My morning routine...
14. If I had a billion dollars...
15. When it rains, I like to...

**A+ IMPROMPTU SPEAKING TOPICS**  
2024-2025 Invitational  
**PRELIMINARY ROUND**

CUT APART FOR TOPIC SELECTION



2024-25 Invitational– Impromptu Prelims

1. Music makes me feel...



2024-25 Invitational– Impromptu Prelims

2. The famous person I wish I could have dinner with...



2024-25 Invitational– Impromptu Prelims

3. If I could build my own furniture...



2024-25 Invitational– Impromptu Prelims

4. The best party I ever attended...



2024-25 Invitational– Impromptu Prelims

5. A movie I could watch over and over again...



2024-25 Invitational– Impromptu Prelims

6. A city I want to move to...



2024-25 Invitational– Impromptu Prelims

7. My favorite kind of exercise...



2024-25 Invitational– Impromptu Prelims

8. A goal I have for the future...



2024-25 Invitational– Impromptu Prelims

9. Someday my generation will...



2024-25 Invitational– Impromptu Prelims

10. Creativity means...



2024-25 Invitational– Impromptu Prelims

11. When I get stressed, I like to relax by...



2024-25 Invitational– Impromptu Prelims

12. A tradition my family has...



2024-25 Invitational– Impromptu Prelims

13. My morning routine...



2024-25 Invitational– Impromptu Prelims

14. If I had a billion dollars...



2024-25 Invitational– Impromptu Prelims

15. When it rains, I like to...





## A+ IMPROMPTU SPEAKING TOPICS

2024-2025 Invitational

### FINALS ROUND

1. Mental health is important because...
2. A career field I'd like to work in someday...
3. Responsibility means...
4. I wish my school district would...
5. A time I had to perform under pressure...
6. Advice I have for kids younger than me...
7. When I can't sleep, I like to...
8. My favorite outdoor space...
9. Uniforms in school...
10. A class I wish my school offered...
11. My tips for eating healthy...
12. I like to express myself by...
13. The strongest relationship I have is with...
14. Something I like to make myself instead of buying from a store...
15. A mistake I will never make again...

**A+ IMPROMPTU SPEAKING TOPICS**  
2024-2025 Invitational  
**FINALS ROUND**

CUT APART FOR TOPIC SELECTION



2024-25 Invitational– Impromptu Finals

1. Mental health is important because...



2024-25 Invitational– Impromptu Finals

2. A career field I'd like to work in someday...



2024-25 Invitational– Impromptu Finals

3. Responsibility means...



2024-25 Invitational– Impromptu Finals

4. I wish my school district would...



2024-25 Invitational– Impromptu Finals

5. A time I had to perform under pressure...



2024-25 Invitational– Impromptu Finals

6. Advice I have for kids younger than me...



2024-25 Invitational– Impromptu Finals

7. When I can't sleep, I like to...





2024-25 Invitational– Impromptu Finals

8. My favorite outdoor space...



2024-25 Invitational– Impromptu Finals

9. Uniforms in school...



2024-25 Invitational– Impromptu Finals

10. A class I wish my school offered...



2024-25 Invitational– Impromptu Finals

11. My tips for eating healthy...



2024-25 Invitational– Impromptu Finals

12. I like to express myself by...



2024-25 Invitational– Impromptu Finals

13. The strongest relationship I have is with...



2024-25 Invitational– Impromptu Finals

14. Something I like to make myself instead of buying from a store...



2024-25 Invitational– Impromptu Finals

15. A mistake I will never make again...





**A+ IMPROMPTU SPEAKING TOPICS**  
**2024-2025 Fall/Winter District**  
**PRELIMINARY ROUND**

1. A pet I want to adopt...
2. I get really excited when I think about...
3. My favorite kind of novel to read...
4. The best month of the year is...
5. If I lived a hundred years ago...
6. I like to stay active by...
7. Confidence means...
8. The best vacation I ever went on...
9. When I feel sick, I like to...
10. Some things I'm grateful for right now...
11. A piece of technology I couldn't live without...
12. A game I like to play with my friends...
13. Tips I have for keeping your bedroom clean...
14. I wish my class could go on a field trip to...
15. My bedtime routine...

**A+ IMPROMPTU SPEAKING TOPICS**  
**2024-2025 Fall/Winter District**  
**PRELIMINARY ROUND**

**CUT APART FOR TOPIC SELECTION**



2024-25 Fall/Winter– Impromptu Prelims

1. A pet I want to adopt...



2024-25 Fall/Winter– Impromptu Prelims

2. I get really excited when I think about...



2024-25 Fall/Winter– Impromptu Prelims

3. My favorite kind of novel to read...



2024-25 Fall/Winter– Impromptu Prelims

4. The best month of the year is...



2024-25 Fall/Winter– Impromptu Prelims

5. If I lived a hundred years ago...



2024-25 Fall/Winter– Impromptu Prelims

6. I like to stay active by...



2024-25 Fall/Winter– Impromptu Prelims

7. Confidence means...



2024-25 Fall/Winter– Impromptu Prelims

8. The best vacation I ever went on...



2024-25 Fall/Winter– Impromptu Prelims

9. When I feel sick, I like to...



2024-25 Fall/Winter– Impromptu Prelims

10. Some things I'm grateful for right now...



2024-25 Fall/Winter– Impromptu Prelims

11. A piece of technology I couldn't live without...



2024-25 Fall/Winter– Impromptu Prelims

12. A game I like to play with my friends...



2024-25 Fall/Winter– Impromptu Prelims

13. Tips I have for keeping your bedroom clean...



2024-25 Fall/Winter– Impromptu Prelims

14. I wish my class could go on a field trip to...



2024-25 Fall/Winter– Impromptu Prelims

15. My bedtime routine...





**A+ IMPROMPTU SPEAKING TOPICS**  
**2024-2025 Fall/Winter District**  
**FINALS ROUND**

1. A time I had to make a tough decision...
2. My generation will change the world by...
3. Using artificial intelligence (A.I.) in school...
4. Someone I know who will always listen to me...
5. If I were mayor for a day...
6. An activity I like to do after school...
7. Teamwork means...
8. Goals I'd like to accomplish before I finish high school...
9. I like to get involved in my community by...
10. I was proud of myself when...
11. A time in history I wish I could time travel back to...
12. My hidden talent is...
13. An award I want to win someday...
14. Sometimes I struggle with...
15. When I feel overwhelmed, I like to calm down by...

**A+ IMPROMPTU SPEAKING TOPICS**  
2024-2025 Fall/Winter District  
**FINALS ROUND**

CUT APART FOR TOPIC SELECTION



2024-25 Fall/Winter– Impromptu Finals

1. A time I had to make a tough decision...



2024-25 Fall/Winter– Impromptu Finals

2. My generation will change the world by...



2024-25 Fall/Winter– Impromptu Finals

3. Using artificial intelligence (A.I.) in school...



2024-25 Fall/Winter– Impromptu Finals

4. Someone I know who will always listen to me...



2024-25 Fall/Winter– Impromptu Finals

5. If I were mayor for a day...



2024-25 Fall/Winter– Impromptu Finals

6. An activity I like to do after school...



2024-25 Fall/Winter– Impromptu Finals

7. Teamwork means...



2024-25 Fall/Winter– Impromptu Finals

8. Goals I'd like to accomplish before high school...



2024-25 Fall/Winter– Impromptu Finals

9. I like to get involved in my community by...



2024-25 Fall/Winter– Impromptu Finals

10. I was proud of myself when...



2024-25 Fall/Winter– Impromptu Finals

11. A time in history I wish I could time travel back to...



2024-25 Fall/Winter– Impromptu Finals

12. My hidden talent is...



2024-25 Fall/Winter– Impromptu Finals

13. An award I want to win someday...



2024-25 Fall/Winter– Impromptu Finals

14. Sometimes I struggle with...



2024-25 Fall/Winter– Impromptu Finals

15. When I feel overwhelmed, I like to calm down by...





## A+ IMPROMPTU SPEAKING TOPICS

2024-2025 Spring District

### PRELIMINARY ROUND

1. If I could be really talented at one thing...
2. Recycling is important because...
3. My favorite part of the summertime...
4. When I'm being creative, I like to draw pictures of...
5. A foreign country I want to visit someday...
6. The best after school snack is...
7. Being helpful means...
8. The ideal weather for a great day...
9. I like to collaborate with my classmates by...
10. If I could build the perfect sandwich...
11. In my dream garden, I would grow...
12. Ways I like to stay organized at school...
13. The coolest thing I have in my bedroom...
14. The method I use to take notes at school...
15. My favorite dish at my favorite restaurant...



**A+ IMPROMPTU SPEAKING TOPICS**  
2024-2025 Spring District  
**PRELIMINARY ROUND**

**CUT APART FOR TOPIC SELECTION**



2024-25 Spring– Impromptu Prelims

1. If I could be really talented at one thing...



2024-25 Spring– Impromptu Prelims

2. Recycling is important because...



2024-25 Spring– Impromptu Prelims

3. My favorite part of the summertime...



2024-25 Spring– Impromptu Prelims

4. When I'm being creative, I like to draw pictures of...



2024-25 Spring– Impromptu Prelims

5. A foreign country I want to visit someday...



2024-25 Spring– Impromptu Prelims

6. The best after school snack is...



2024-25 Spring– Impromptu Prelims

7. Being helpful means...



2024-25 Spring– Impromptu Prelims

8. The ideal weather for a great day...



2024-25 Spring– Impromptu Prelims

9. I like to collaborate with my classmates by...



2024-25 Spring– Impromptu Prelims

10. If I could build the perfect sandwich...



2024-25 Spring– Impromptu Prelims

11. In my dream garden, I would grow...



2024-25 Spring– Impromptu Prelims

12. Ways I like to stay organized at school...



2024-25 Spring– Impromptu Prelims

13. The coolest thing I have in my bedroom...



2024-25 Spring– Impromptu Prelims

14. The method I use to take notes at school...



2024-25 Spring– Impromptu Prelims

15. My favorite dish at my favorite restaurant...





**A+ IMPROMPTU SPEAKING TOPICS**  
**2024-2025 Spring District**  
**FINALS ROUND**

1. Gossip...
2. My tips for overcoming being nervous...
3. Being on a sports team can teach you...
4. A time when I had to stand up for myself...
5. I like to stay prepared for emergencies by...
6. My generation is different from the ones before us...
7. I wish everyone cared about...
8. If I could create a mural in my school...
9. A university I would like to attend...
10. When I feel jealous, I try to...
11. The person I look up to the most...
12. If everyone had to travel everywhere by bike...
13. Resilience means...
14. I try to be a good friend by...
15. My biggest hope for the future...

**A+ IMPROMPTU SPEAKING TOPICS**  
2024-2025 Spring District  
**FINALS ROUND**

CUT APART FOR TOPIC SELECTION



2024-25 Spring– Impromptu Finals

1. Gossip...



2024-25 Spring– Impromptu Finals

2. My tips for overcoming being nervous...



2024-25 Spring– Impromptu Finals

3. Being on a sports team can teach you...



2024-25 Spring– Impromptu Finals

4. A time when I had to stand up for myself...



2024-25 Spring– Impromptu Finals

5. I like to stay prepared for emergencies by...



2024-25 Spring– Impromptu Finals

6. My generation is different from the ones before us...



2024-25 Spring– Impromptu Finals

7. I wish everyone cared about...



2024-25 Spring– Impromptu Finals

8. If I could create a mural in my school...



2024-25 Spring– Impromptu Finals

9. A university I would like to attend...



2024-25 Spring– Impromptu Finals

10. When I feel jealous, I try to...



2024-25 Spring– Impromptu Finals

11. The person I look up to the most...



2024-25 Spring– Impromptu Finals

12. If everyone had to travel everywhere by bike...



2024-25 Spring– Impromptu Finals

13. Resilience means...



2024-25 Spring– Impromptu Finals

14. I try to be a good friend by...



2024-25 Spring– Impromptu Finals

15. My biggest hope for the future...



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 7/8  
INVITATIONAL MEET 2024-2025

**“Longhorn Caverns State Park”**

Texas is known for many things: longhorn cattle, bluebonnets, the lone star, and wide-open spaces among other things. What it's not so well known for is its caves and caverns. However, there is one state park dedicated to exactly that. Longhorn Cavern State Park is in Burnet County, Texas, and has been operated by the Texas Parks and Wildlife Department since 1938. Let's find out more about it.

Longhorn Cavern is a cave with a lot of history. Around 500 million years ago, a shallow tropical sea covered the area where it is located. The sea floor became covered with sediments and the remains of sea creatures and eventually turned into what is called Ellenberger Limestone. Ellenberger limestone consists of white to gray limestone and dolomite that contains white and yellow chert. Dolomite is a common mineral, but it is not generally found in sedimentary rock that has recently been formed. It is most typical of rocks formed millions of years ago.

**1:00**

It was in this area of Texas, between 280 and 300 million years ago, great underground forces created an event called the Llano Uplift. The Llano Uplift is a geologically ancient, low geologic dome that is about 90 miles in diameter and located mostly in Llano, Mason, San Saba, Gillespie, and Blanco counties in Texas. The granite rocks of the Llano Uplift come from the Precambrian era, which predates even the oldest dinosaurs. This layer of granite was revealed as the younger, surrounding sediment and limestone was eroded away. Along with the rest of the Texas Hill Country, the Llano Uplift also rose in elevation during the Cenozoic when the Balcones Fault shifted, lifting the area to the west.

During this geologic upheaval, faults and fractures formed in the flat limestone, and an underground river system dissolved and eroded the rock. These very slow-moving

underground currents created what would be known as the Longhorn cavern when they worked their way through cracks and other openings in the Ellenberger Limestone. The result of the water's work is a wondrous world of odd-shaped formations, domed ceilings, gaping sinkholes, tight crawl ways, fascinating rock carvings, rooms of sparkling crystals and alabaster halls of dolomite that look like exquisite Italian marble.

Because few caverns in the United States were formed this way, Longhorn Cavern is unique. Many minerals abound under the surface of this area. These unusual rocks found in this region come from the older rocks exposed at the surface. For instance, rockhounds have found amethyst, quartz, galena, garnet, and even bits of gold.

**2:00** Some of the earliest visitors to the cavern were the region's prehistoric humans who used the caves for shelter. Legend holds that the Comanche held council meetings in the cavern's largest room, which today is known as the Indian Council Room. One interesting piece of trivia told during the cavern tour is that the Comanche were very fierce warriors, but they did not like the dark. They were very superstitious. They had council meetings during the day, and they made arrowheads and spearheads out of the flint they found in the area. They were in the cavern in the daytime, but when it got dark at night, they left.

The Comanche also used the caverns to trap horses. Early Texas frontier settlers, Confederate soldiers, and Wild West outlaws followed over the years. In the mid-1800s, Anglo settlers found the cavern and began mining bat guano from Mexican Freetail bats for use in manufacturing gunpowder during the Civil War. Tourists began visiting the cave in the 1870s. Throughout Prohibition in the 1920s, the cavern was a subterranean speakeasy. For just \$1.10, guests could enjoy the Queen's Throne room, which was a section of the cavern with a bootleg whisky bar, a dance floor, and a bandstand. This

**3:00** underground nightclub also conducted live radio broadcasts.



The colorful allure of the place attracted many famous guests, including Al Capone and Mae West. During the Cold War and President Lyndon B. Johnson's administration, the cavern was to be used as a bunker. In the event of a national emergency, Johnson would have been brought down and set up with a radio table and enough food to last at least three years.

Legend even tells that infamous Texas outlaw Sam Bass hid \$2 million inside the cave. The money has yet to be discovered. Sam Bass was a 19th Century American bad guy. He was known as a train robber and outlaw. It is said that he was a member of a gang that robbed a Union Pacific train in Nebraska of \$60,000 in newly minted gold. To date, that is the biggest train robbery to have been committed in the United States. In 1932, the State of Texas purchased the land that Longhorn Cavern State Park occupies from rancher D.G. Sherrard.

In 1934, a group of Civilian Conservation Corps (CCC) workers began working on the cavern and the surrounding acreage. The CCC was a depression era program created by Franklin Roosevelt that created jobs for men around the country. With the onset of the Great Depression in the 1930s, the entire nation suffered from massive

**4:00** unemployment. More than half of all men under the age of 25 were out of work. The CCC put young men to work developing state and national parks as well as rehabilitating forests and controlling soil erosion.

Although they had just finished working at Blanco State Park, between 1934 and 1942, the men of CCC Company 854 worked to create two additional state parks in the same area. At Longhorn Cavern, men used wheelbarrows, pickaxes, and shovels to manually excavate over 3,000 dump trucks worth of debris. While working on the 639-acre park, they laid the first pathways and built an administration building, an observation tower, and a lighting system that was over 2 miles long. They hauled some 2.5 tons of silt, debris and guano (bat poop) out of the underground cavern, mapped passageways, and made improvements that would allow public access.

**5:00**

Under the direction of noted architects Samuel C.P. Vosper and George Walling, the CCC used cut limestone quarried in the park and crystal formations to add Gothic arches and colorful decorations to the administration building and a compound stairway to be used as the entrance to the cavern. Longhorn Cavern State Park was opened to the public in 1938. The need for men in the military during World War II cut short plans for the 2nd State Park the CCC was slated to build in this area - Inks Lake State Park. Despite this, they were able to construct a boathouse and road system for it with dozens of stone culverts. Inks Lake State Park still exists and is frequently visited by tourists. It is located within the Llano Uplift as well and contains rocks which are dated at 1,232 million years old. These rocks are a granitic gneiss and are named Inks Lake Gneiss.

Longhorn Cavern itself is approximately 135 feet deep. The limestone cave is filled with minerals, including smooth dolomite and glittering calcite crystals. Thanks to the lighting system, colorful striations and dripping stalactites can also be enjoyed. The temperature inside the cavern is 68 degrees year-round, so whether you are escaping the summer heat or the winter cold, the cavern is always pleasant. Entrance to the cavern is through a natural sinkhole at the cave's entrance.

**6:00**

Visitors enter the cavern by stepping down a 52-step staircase. As mentioned earlier, the cavern was formed by erosion as a result of a moving, underground river. This is different from other well-known caverns. For example, Carlsbad Caverns are called solution caves, or drip caves, meaning that the water sank through the earth and dissolved out big caves and formations. Longhorn Cavern is much more sculpted, and it's a very long, fairly level cave. Guided tours allow visitors to learn all about the geologic features as well as some of the history and folklore.

Longhorn Cavern State Park has hiking trails that showcase the plant life in the area. The woodland is typical of the Hill Country with a mix of oaks and junipers. There are many large Plateau live oaks, Texas oaks and other hardwoods as well. Texas oaks only

grow in limestone derived soils, so they flourish in the park. The limestone of the cavern on the ridge is in sharp contrast to the gneiss and granite bedrock that is also present thanks to the Llano Uplift. Although the caverns were once home to a colony of Mexican free-tailed bats, now they are only inhabited by tri-colored bats. Nature trails in the park are over a mile long and are home to a wide variety of birds, including the endangered golden-cheeked warbler and black-capped vireo.

In 1971, the park was designated a Registered National Natural Landmark. The National Landmarks program recognizes and encourages the conservation of sites that contain outstanding biological and geological resources. This honor is determined by the Secretary of the Interior based on the site's condition, rarity, and value to science education. The park's administration building was listed as a Recorded Texas Historic Landmark in 1989.

**7:00**

In recent years, there have been several exciting events. In 2006, Steven Kurtz, the curator of Longhorn Cavern State Park, re-introduced chamber music to the cave with the creation of the Simple Sounds concert series. Two years later, on February 14, 2008, as the Burnet County band Redneck Jedi performed, dancing was finally allowed back on the cave floor. On April 4, 2008, Redneck Jedi became the first band to record an album inside the cave. The album was aptly entitled *Unplugged and Underground*.

**INVITATIONAL 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



**Listening**  
grades 7 & 8

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

UIL LISTENING CONTEST - GRADES 7/8  
INVITATIONAL MEET 2024-2025

# TEST

## **"Longhorn Caverns State Park"**

1. In which county is Longhorn Cavern State Park located?
  - A. Llano
  - B. Burnet
  - C. Gillespie
  - D. Blanco
2. What was the purpose of the Civilian Conservation Corps?
  - A. to build state and national parks out of local, natural resources
  - B. to prevent natural resources from erosion and waste
  - C. to provide jobs to young men during the Great Depression era
  - D. to rehabilitate men who had lost their jobs due to a nationwide drought
3. Why was Inks Lake State Park not completed by the CCC?
  - A. Work on Longhorn Cavern State Park took too long and they ran out of time.
  - B. There was not enough money to pay the workers to finish the park.
  - C. A nationwide drought caused the Lake to be unsafe for workers.
  - D. World War II caused the workers to be needed in the military
4. All of the following rocks and minerals have been found in Longhorn cavern except
  - A. amethyst
  - B. copper
  - C. garnet
  - D. quartz
5. How did Steven Kurtz re-introduce chamber music to the cavern in 2006?
  - A. a concert series called the Simple Sounds
  - B. a dance hosted by the Redneck Jedi
  - C. a movie with music from the album Unplugged Underground
  - D. a fundraiser playing original music from the 1920s
6. Which mineral is usually found in Ellenberger limestone?
  - A. dolomite
  - B. galena
  - C. granite
  - D. flint
7. Approximately how deep is Longhorn Cavern? \_\_\_\_\_ feet.
  - A. 125
  - B. 145
  - C. 135
  - D. 155

8. From which era do the granite rocks of the Llano Uplift come?
- A. Cenozoic
  - B. Precambrian
  - C. Devonian
  - D. Permian
9. In what year did the Texas Parks and Wildlife Department open Longhorn Cavern State Park?
- A. 1934
  - B. 1932
  - C. 1938
  - D. 1945
10. What type of bats can currently be found living in the park?
- A. Mexican free tail
  - B. Velvety Free Tail
  - C. Spotted
  - D. Tri-colored
11. About how many million years ago was the area where Longhorn Cavern is located covered with a shallow sea whose floor was littered with sediments and remains of sea creatures?
- A. 200
  - B. 300
  - C. 400
  - D. 500
12. In the 1800s, what did miners sell that was abundant in the cavern?
- A. flint for making arrowheads
  - B. bat poop for making gunpowder
  - C. quartz for making jewelry
  - D. shells for making grout
13. Which United States President planned to use Longhorn Cavern as a bunker in case of a national emergency?
- A. Franklin Roosevelt
  - B. Lyndon B. Johnson
  - C. Dwight Eisenhower
  - D. John F. Kennedy
14. The Longhorn Cavern State Park consists of \_\_\_\_\_ acres.
- A. 639
  - B. 832
  - C. 725
  - D. 934
15. Noted architects Samuel C.P. Vosper and \_\_\_\_\_ designed the Gothic arches and colorful decorations of the administration building.
- A. Sam Bass
  - B. D.G. Sherrod
  - C. George Walling
  - D. Steve Kurtz

16. What is the purpose of designating a property a Registered National Natural Landmark?
- A. to protect the property that has historical value from being sold and commercialized
  - B. to encourage people to visit the area and appreciate its beauty
  - C. to point out the significance of the types of animals that live there and protect their natural habitats
  - D. to encourage the conservation of sites containing outstanding biological and geographical resources
17. What was the name of the first album ever recorded inside the cavern?
- A. *Redneck Jedi*
  - B. *Unplugged and Underground*
  - C. *Simple Sounds*
  - D. *Echoes of the Ancients*
18. Which of the following types of trees is not commonly found in the park?
- A. pines
  - B. live oaks
  - C. juniper
  - D. hardwoods

### **True/False**

19. When designating a property to be a Registered National Natural Landmark, the Secretary of the Interior considers the sites' condition, rarity, and value to science education.
20. Texas oaks only grow in limestone derived soils, so they flourish in the granite and gneiss bedrock that is present in the area.
21. The Llano Uplift is relatively new geologic dome that is about 90 miles in diameter located mostly in Llano, Mason, San Saba, Gillespie, and Blanco counties.
22. Comanche held council meetings in the cavern during the day, but were very superstitious and did not like the dark, so they vacated the caverns during the nighttime hours.
23. During the 1920s, for just \$1.50, guests could enjoy music and dancing in the Queen's Throne room, but it wasn't until Prohibition ended that they were allowed to drink alcoholic beverages in the cavern.
24. During the Great Depression in the 1930s, the entire nation suffered from massive unemployment resulting in more than half of all men under the age of 25 being out of work.
25. After stepping into the cavern via a natural sinkhole with a 52 step staircase, visitors can enjoy the pleasant temperature of 68 degrees all year-round.

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ LISTENING  
INVITATIONAL TEST– GRADES 7 & 8**

**Answer Key**

**“Longhorn Caverns State Park”**

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



UIL LISTENING CONTEST - GRADES 7/8  
FALL/WINTER DISTRICT 2024-2025

**"Mrs. Baird's Bread: A Texas Tradition"**

If you go into a grocery store in any town in Texas, it's fairly certain that you will find Mrs. Baird's bread in the bread aisle. For decades, this brand has been sold successfully throughout the United States satisfying the nation's hunger for delicious, fresh bread. The story of Mrs. Baird's bread is not just a Texas tale of good eating, however. It is an example of the entrepreneurial spirit that fills our state and the nation. Let's find out where it all began.

Ninnie Baird was born on May 23, 1869, in Gibson County, Tennessee. Her parents were Elisha and Amanda Elizabeth Harrison. Her mother died when Ninnie was five years old. Her father remarried, and she lived with her father and stepmother until her father died in 1882. After her father's death, she was raised by an aunt who taught her to bake. She lived with her aunt for the next three years until she met William Allen Baird, who was also an orphan. They were married in 1886 when Ninnie was seventeen years old. William was nineteen.

The couple settled near Trenton, Tennessee where William built a house on family land and worked as a wood cutter. In 1898, they moved to Obion, Tennessee, where William entered the restaurant and bakery business. William Allen Baird ran a restaurant and bakery in Trenton and a small bakery in Covington. Soon, Ninnie Baird began baking and selling bread out of her kitchen.

**1:00** In 1901, Ninnie and William moved from Tennessee to Fort Worth, Texas. William opened a restaurant and became very successful. While looking for another business venture, William decided he wanted to introduce the first steam popcorn machine to Fort Worth. This machine was red with brass fillings and had a whistle on top. William later sold the machine and focused on running a series of restaurants. Unfortunately,

his health began to fail. William was diagnosed with diabetes, an untreatable disease in those days. Ninnie knew that she would need a way to help support her family.

At this point, they had eight children. The three oldest children began working in the bakery to learn the business. All of the baking was done with a four-loaf, wood-burning oven that required split wood and stoking to keep a constant temperature. Realizing that she could make a living baking bread, Ninnie sold their restaurant in 1908 and opened her first bakery in Fort Worth - Mrs. Baird's Bread. Who would have imagined that this small bakery would be the birthplace of the Mrs. Baird's Bread company that we know today?

**2:00** During these early years, Mrs. Baird's bakery was a very small business which provided fresh bread to local community members. Her children would help her bake and then deliver the bread on foot and by bicycle. After William passed away in 1911, she went into the bread business with great determination.

In 1915, Mrs. Baird's Bread purchased a used commercial oven from the Metropolitan Hotel for \$75. She paid \$25 in cash and the balance in bread and rolls. This oven had the capacity to bake 40 loaves at a time. In 1917, the bakery bought a horse and wagon. A new bakery was built in Fort Worth in 1918. By 1928, the bakery had been expanded nine times and was one of the largest bakeries in Texas. Each of her sons was running a bread factory in different cities in Texas including Dallas and Houston. At one point there were as many as 3,200 factory workers in their employ.

As the business grew, they continued to expand and improve. They built a brick building for their factory in Fort Worth and equipped it with a Peterson Peel gas-fired oven, with capacity for 400 one-pound loaves. Eventually, the family traded the horse and buggy for a Ford car, retrofitted to serve as a delivery truck and painted with the company's first slogan, "Eat More Mrs. Baird's Bread." A second Ford truck was

**3:00** purchased and sent on a sales route to keep up with demand. For 24 years, Mrs. Baird's

operated a bakery at Bryan and North Carroll streets in Dallas. In 1953, to keep up with growth in the Dallas area, the company opened what was then the largest bread plant in the United States at Central Expressway and Mockingbird Lane. According to the Sept. 8, 1957, issue of *The Southwestern Miller*, the plant housed two separate bakeries in its 140,000 square feet of floor space. This facility could produce 2,000,000 pounds of bread per week.

One of the main reasons the bread became so popular was that Ninnie was committed to producing quality products using simple ingredients which ensured that the bread was consistently delicious. While other bread companies adopted the continuous-mixing process where chemicals are introduced into the bread causing it to rise, the Bairds continued to let their dough rise naturally with yeast. In the early days, all production was done by hand. Ninnie used a wooden trough, 6 feet long, 24 wide, and 24 inches deep. It held about 300 pounds of dough. She mixed flour and other ingredients in the trough and left it to rise, punched it down, let it rise, and repeated this process until the dough was ready to be formed into loaves weighing 18 ounces.

**4:00** During the Great Depression which lasted from 1929 to 1939, Mrs. Baird's Bread Company was able to continue to thrive while many other businesses folded. The Great Depression was a worldwide economic downturn that was the longest and most severe depression ever experienced by the Western world. Although it originated in the United States, it caused drastic severe unemployment and acute deflation (the lowering of prices of goods due to the public's inability to purchase them). Because Mrs. Baird's Bread had always been priced affordably, the depression had less effect on her company.

The 1940s was a significant time for Mrs. Baird's Bread Company. During these years of growth, changes were also taking place in the bread industry. In the early 1920s, wrapping machines were introduced. Bread slicing machines made their debut in 1927. In 1936, Mrs. Baird's began hand-twisting bread, an innovative baking technique that

intertwined two pieces of dough into one loaf. In 1947, Mrs. Baird's Bakery began selling sliced bread. Up until this point, the bread had to be sliced by hand after purchase. This pre-sliced bread appealed to busy families and quickly gained popularity causing a rise in sales. By the 1950s, Mrs. Baird's bread was available in grocery stores and supermarkets across Texas.

**5:00** Mrs. Baird died at the age of 92 on June 3, 1961. She had eight surviving children. The Texas State Senate passed Senate Resolution No. 13 in her memory. By the time of her death, the business she started in her home kitchen had grown to 12 plants with over 2,500 employees and was the largest family-owned bakery in the country. Mrs. Baird's Bakeries continued to be the largest U.S. family-owned baking company until 1998 when Grupo Bimbo, the largest baking company in the world based in Mexico City, bought it. Annual sales volume was about \$300 million at that time.

Even now, Ninnie Baird's legacy in the baking industry continues as Mrs. Baird's market reach expands. Mrs. Baird's bread entered several Missouri markets, including Kansas City, in 2005. In 2005, Mrs. Baird's Bread also could be found in Texas, Oklahoma, portions of Louisiana, northwestern Arkansas and northeastern Kansas.

Because she felt that giving back to the community was vitally important, Ninnie's legacy lives on in the Ninnie L. Baird Foundation. Today the Ninnie L. Baird Foundation continues her legacy of improving the life for children and families through family preservation, education, and nutrition. The foundation also provides scholarships and grants to worthwhile causes.

**6:00** In one of their 1973 issues, Bakery Production and Marketing magazine featured Mrs. Baird's success story. Mrs. Baird was also inducted into the Baking Hall of fame. Individuals who are inducted into the Baking Hall of Fame are honored for their positive impact on the commercial baking industry. In 1992, the Bairds became the first family to be inducted into the Texas Business Hall of Fame.

Throughout the years, Mrs. Baird's bread has stood the test of time. It serves as a reminder of the power of tradition, innovation, and the importance of maintaining a personal touch in a world of mass production. It continues to be more than just bread. It is a slice of history and a testament to the Texan entrepreneurial spirit.

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



**Listening**  
grades 7 & 8

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

UIL LISTENING CONTEST - GRADES 7/8  
FALL/WINTER DISTRICT 2024-2025

# TEST

## "Mrs. Baird's Bread: A Texas Tradition"

1. Who taught Ninnie Baird to bake?  
A. her mother  
B. her father  
C. her aunt  
D. her nanny
2. Where was the first restaurant opened by William Baird?  
A. Obion, Tennessee  
B. Covington, Tennessee  
C. Gibson, Tennessee  
D. Trenton, Tennessee
3. In what year did Ninnie and William move to Texas?  
A. 1901  
B. 1886  
C. 1898  
D. 1911
4. How much did the Metropolitan Hotel charge Mrs. Baird for her first commercial oven?  
A. \$125  
B. \$100  
C. \$75  
D. \$50
5. In 1957, the Mrs. Baird's bakery in Dallas on Central Expressway and Mockingbird Lane could produce \_\_\_\_\_ pounds of bread per week.  
A. 1 million  
B. 2 million  
C. 3 million  
D. 4 million
6. How long did the Great Depression last?  
A. 5 years  
B. 10 years  
C. 7 years  
D. 12 years
7. How much does a typical loaf of Mrs. Baird's bread weigh?  
A. 1 pound  
B. 18 ounces  
C. 2 pounds  
D. 24 ounces
8. What disease was William Baird diagnosed with while they lived in Fort Worth, Texas?  
A. cancer  
B. heart disease  
C. diabetes  
D. anemia

9. What was one benefit from purchasing a commercial oven in 1915?
- A. It could bake up to 40 loaves at a time.
  - B. It was easier to keep clean and up to health code.
  - C. It was gas-fired not electric making it cheaper to use.
  - D. It had a special warming area to allow the bread to rise.
10. In 1992, The Bairds became the first family to be inducted into the
- A. Baking Hall of Fame
  - B. Bakery Production Foundation
  - C. Bakers Magazine Alumni
  - D. Texas Business Hall of Fame
11. Ninnie Baird was born on May 23 in the year \_\_\_\_\_.
- A. 1869
  - B. 1879
  - C. 1889
  - D. 1899
12. Immediately after marrying, William Baird worked as a
- A. restaurant owner
  - B. baker
  - C. wood cutter
  - D. railroad worker
13. Mrs. Baird's original bakery had a four-loaf oven that was heated by
- A. electric current
  - B. a wood fire
  - C. gas flames
  - D. battery power
14. What is one main procedure that made Mrs. Baird's bread different from other companies?
- A. The Bairds allowed their bread to rise with yeast not chemicals.
  - B. The bread was baked in an electric oven with consistent temperature.
  - C. Flour was ground at a local mill and was used when it was fresh.
  - D. All loaves were hand wrapped and delivered fresh by horse and buggy.
15. By 1928, the Bairds had factories in all of the following cities except
- A. Fort Worth
  - B. Dallas
  - C. Houston
  - D. Austin
16. In the early days, Ninnie's wooden trough held about \_\_\_\_\_ pounds of dough.
- A. 100
  - B. 200
  - C. 300
  - D. 400



17. In what decade were bread wrapping machines introduced to the bread industry?
- |         |         |
|---------|---------|
| A. 1910 | B. 1920 |
| C. 1930 | D. 1940 |
18. What innovation in 1947 caused Mrs. Baird's bread to show a rise in sales?
- |                          |                       |
|--------------------------|-----------------------|
| A. plastic wrapped bread | B. hand twisted bread |
| C. pre-sliced bread      | D. oven risen bread   |

**True/False**

19. Because Mrs. Baird's Bread had always been priced lower than most other breads, they struggled to make a profit during the Great Depression.
20. Mrs. Baird's Bread can be purchased in Missouri, Texas, Oklahoma, Louisiana, Mississippi, Arkansas, and Kansas.
21. The company's first slogan painted on its delivery truck was "Eat More Mrs. Baird's Bread."
22. By the time of her death, the business she started in her home kitchen had grown to 12 plants with over 2,500 employees and was the largest family-owned bakery in the country.
23. In 1998, Grupo Bimbo, the largest baking company in the world based in Mexico City, bought Mrs. Baird's company which at that point had an annual sales volume of \$300 million.
24. The Great Depression was an economic downturn that created huge inflation causing the prices of goods to rise to a point that the general public was unable to purchase them.
25. In one of their 1973 issues, the Texas Business and Marketing magazine featured Mrs. Baird's biography and road to success.

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ LISTENING  
FALL/WINTER DISTRICT TEST – GRADES 7 & 8**

**Answer Key**

**“Mrs. Baird’s Bread: A Texas Tradition”**

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

UIL LISTENING CONTEST - GRADES 7/8  
SPRING DISTRICT 2024-2025

**"Vanilla"**

Have you ever stopped for ice cream and couldn't decide on a flavor? Chocolate? Rocky Road? Strawberry? And of course there is the ever-present plain vanilla. While there are definitely fancier, more interesting flavors, vanilla is always a reliable choice. Vanilla is also a flavor that is used in coffee creamers, cookie and cake batter, and many other confections. What is vanilla, and where did it originate? Let's find out.

Vanilla is a substance that is derived from vanilla beans which come from the vanilla plant. These aren't beans like green beans that grow in vegetable gardens, however. Vanilla is a member of the orchid family. Vanilla is a native of South and Central America and the Caribbean. The first people that cultivated, or purposely grew, vanilla, are the Totonacs of Mexico along the Mexican east coast. In the 15th Century when the Aztecs conquered the Totonacs, they acquired it. The Spaniards, then, received vanilla from the Aztecs when they conquered them. There are even those who claim that vanilla was introduced to western Europe by Hernan Cortes.

**1:00** Hernan Cortes was a conquistador who conquered the Aztecs and claimed Mexico for Spain in 1521. However, although the Tontonac people are given credit for being the earliest cultivators of vanilla, the oldest reports of people using vanilla come from the Maya. The Maya used vanilla in a beverage made with cacao and other spices. The Aztecs conquered the Mayans as well as the Totonacans. Soon they began adding vanilla to a beverage consumed by nobility known as chocolatl. The Aztecs drank their chocolatl with vanilla, and Europeans continued the method.

Vanilla was considered as nothing more than an additive for chocolate until the early 17th Century when Hugh Morgan, an apothecary employed by Queen Elizabeth I, invented vanilla flavored sweetmeats. The Queen adored them. By the next century,

the French were using vanilla to flavor ice cream. In fact, Thomas Jefferson brought a recipe to America from France in the 1780s when he lived in Paris as the American minister to France.

After the Spanish conquest of the Aztecs, Europeans wanted to grow the vanilla plant for themselves. It was expensive to bring vanilla beans all the way from Mexico. The vanilla orchid plant was grown in botanical gardens in both France and England, but the plants never grew the elusive vanilla bean. Growers couldn't understand why until centuries later.

**2:00** In 1836, Belgian horticulturist Charles Morren discovered that vanilla's natural pollinator was the *Melipona* bee, an insect that didn't live in Europe. Five years later, on the island of Reunion, everything changed. In 1841, an enslaved boy on the island named Edmond Albius developed a method for hand-pollination of vanilla which involves exposing and mating the flower's male and female parts. His method, although painstakingly slow, was successful and spread from Reunion to Madagascar and other neighboring islands.

Eventually his method made its way to Mexico and then to Europe as a way to increase the availability of the vanilla bean. This new availability led to vanilla finding its way into cakes, ice cream, perfumes and medicines. Farmers were not able to keep up with a growing demand for vanilla due to the time and energy that went into cultivation and processing and prices soared. That problem continues even today as pure vanilla is still made from hand pollinated plants.

Madagascar and Reunion islands are still the world leader in vanilla production with 75 percent of the world's vanilla being produced from those two islands. Other smaller plantations exist in India, Tahiti, and Indonesia. Every American consumes about 5.4 grams of vanilla annually. This amounts to a little over 2 vanilla beans every year. It **3:00** doesn't seem like much per person, but it adds up to over 638 million beans consumed

in the United States each year. And we are just one country. Imagine the amount of vanilla beans needed to supply the needs of the entire world!

Vanilla takes a lot of skill to grow. As learned through history, you can't just put the seed into the ground and expect it to produce a crop. Hand pollination is a learned skill. Many vanilla farmers have been growing vanilla for three to four generations and have passed down their knowledge. Vanilla grows as a clinging vine, reaching lengths of up to 300 feet, from which sprout pale greenish-yellow flowers, about four inches in diameter.

If pollination is successful, a fruit develops in the form of a 6- to 10-inch-long pod filled with thousands of minuscule black seeds. These pods are called beans. Timing is everything. All flavor in the vanilla bean is developed in its last 3-4 months on the vine. The vanilla bean may be at full weight and size at 5 months, but the last 4 months are the most critical because the bean is ripening and developing its flavor components. Vanilla growers need to know exactly when to pick the pods. After the pods are picked, they must be cured and dried.

**4:00** After harvesting, the vanilla pods are sorted and graded. They are then blanched in hot water to prevent them from fermenting and placed in large containers to sweat for 36 to 48 hours. This is when the beans start to change from green to brown and start to develop that amazing aroma. From there, the beans undergo alternating periods of sun drying during the day and sweating at night. This last between 5 to 15 days and ends with a period of very slow drying. The beans are placed on racks located in a well-ventilated room. It can take up to 30 days depending on the grade of the bean. The entire process - from growing, pollinating, drying, curing and finally preparing for export - takes around one year. About 5 to 7 pounds of green vanilla beans are needed to produce only one pound of processed vanilla. This is another reason real, pure vanilla is one of the most expensive spices in the world, second only to saffron.

There are several other factors that affect the processing of vanilla. One major factor is environmental. Drought and storms on the Madagascar island chain can create major shortages of natural vanilla extract. In fact, On March 7, 2017, Cyclone Enawo struck Madagascar, the country where the majority of the world's vanilla is grown. The devastating storm was the third-biggest cyclone on record and hit a country already

**5:00** grappling with years of drought. The result was a dramatic rise in prices and a change in the taste and aroma of an entire crop. This caused an even larger shortage.

On a normal year, total worldwide production each year is only about 2000 metric tons, which doesn't come close to meeting demand. In fact, because of the high demand and critical shortages, about 99% of vanilla-flavored products on the market don't actually contain real vanilla.

So, if they don't contain real vanilla, what do they contain? In the late 19th Century, scientists figured out how to derive vanillin from less expensive sources than the vanilla bean. Vanillin is the compound that gives vanilla its signature scent. These sources included eugenol (a chemical compound found in clove oil), lignin (which is found in plants), wood pulp, and even cow poop.

Today things have changed a bit. About 85 percent of vanillin used today comes from guaiacol (gwuy -a- col) which is made from petrochemicals. Most of us don't know enough about chemistry to understand it, but basically, vanilla is the plant. Vanillin is one of up to 250 chemical compounds that make up the flavor that we know as vanilla.

**6:00** How do we know if a flavor is natural or artificial? The Food and Drug Administration (FDA) defines natural flavors as having come from a spice, fruit, vegetable, edible yeast, herb, bark, bud, root, leaf or similar plant material that is used for flavoring not nutrition. In short, things that naturally grow on the earth that are used to flavor other things, not to get specific nutrients. Artificial flavoring is, on the other hand, substances that do not grow naturally on the earth but instead are chemical compositions. Natural

vanilla comes from the vanilla orchid. Artificial vanilla contains between 250 to 500 different flavor and fragrance components. Most people can't tell the difference. But real vanilla extract is thicker and darker in color, and it is speckled with seed fragments. If you are looking at ice cream made with real vanilla extract as opposed to artificial vanilla, you can see the tiny dark seed fragments mixed in with the cream.

Also, real vanilla extract is made from real vanilla beans that grow naturally in soil. Depending on the nutrients in the soil, the vanilla flavor varies a bit. Artificial vanilla will always be exactly the same because it is made with a recipe of chemicals that doesn't change. Although real vanilla is naturally better, artificial vanilla is at least 20 times less expensive. So, chances are, if you are eating factory made vanilla flavored treats or

**7:00** sniffing a vanilla scented candle, it was made with artificial, not natural, vanilla.

If most people can't tell the difference between natural vanilla and artificial, why should it matter to us? Mostly because the demand for less expensive artificial vanilla flavoring comes with a cost to our environment. According to the journal *Industrial & Engineering Chemical Research*, when these compounds are produced, it creates a toxic stream of wastewater. This water must be treated before it can be released back into the environment. Some of the components can only be used one time, which creates tremendous waste. Scientists are working to find more environmentally friendly ways to manufacture it.

So, the next time you check out the ice cream section of your local grocery store or browsing the vanilla scented candles at the candle store, remember the time and effort it takes to extract or create that wonderful vanilla flavor and aroma. There's nothing plain vanilla about it.

**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



**Listening**  
grades 7 & 8

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



UIL LISTENING CONTEST - GRADES 7/8  
SPRING DISTRICT 2024-2025

TEST

**"Vanilla"**

1. Who were the first people to cultivate vanilla?  
A. Aztecs  
B. Totonacs  
C. Spaniards  
D. Europeans
2. Why weren't the Europeans initially successful in growing vanilla beans?  
A. The climate was not warm enough.  
B. They did not have both male and female plants.  
C. They were unable to pollinate the plants.  
D. The plants needed a special water to produce a vanilla bean.
3. What type of plant grows the vanilla bean?  
A. rose  
B. tuber  
C. orchid  
D. bulb
4. What color is the vanilla flower?  
A. greenish yellow  
B. pinkish red  
C. orangey brown  
D. black and ivory
5. Approximately how many vanilla beans are consumed in the United States alone each year?  
A. 559 million  
B. 638 million  
C. 742 million  
D. 841 million
6. What catastrophic event hit Madagascar in 2017 affecting an entire crop of vanilla?  
A. a major earthquake  
B. a severe drought  
C. a ferocious wildfire  
D. a devastating cyclone
7. If you are looking for ice cream made from real vanilla extract, what should you look for?  
A. an ivory color  
B. tiny black seeds  
C. the signature scent  
D. a significantly higher price

- 7/8 Spring 2024-2025 page 2**

16. What is vanillin?
- A. a chemical that causes the vanilla bean to ripen
  - B. the type of pollen that is formed in the male part of a vanilla plant
  - C. the thick syrup that contains the vanilla flavor
  - D. a compound that gives vanilla its fragrance
17. How many vanilla beans does an individual American consume over the course of 1 year?
- A. 1
  - B. 2
  - C. 3
  - D. 4
18. Madagascar and Reunion islands are the world leader in vanilla production with a combined amount that is \_\_\_\_\_ of the world's vanilla production annually.
- A. 60%
  - B. 75%
  - C. 80%
  - D. 95%

### **True/False**

19. About 5 to 7 pounds of green vanilla beans are needed to produce only one pound of processed vanilla.
20. Vanilla grows as a tall stem reaching about 7-8 feet tall and grows one flower that is approximately four inches in diameter.
21. After harvesting, the vanilla pods are placed in ovens to dehydrate for 36 to 48 hours before being sorted and graded.
22. The FDA defines natural flavors as having come from things that naturally grow on the earth that are used to flavor other things as well as provide specific nutrients needed for health and well-being.
23. Although real vanilla is naturally better, artificial vanilla is at least 20 times less expensive than natural vanilla and is most likely produced from many chemical compounds including those from petrochemicals.
24. Although it is less expensive to manufacture, some of the components of artificial vanilla can only be used one time.
25. Hernan Cortes was a conquistador who conquered the Aztecs and claimed Mexico for Spain in 1521.

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ LISTENING  
SPRING DISTRICT TEST – GRADES 7 & 8**

**Answer Key**

**"Vanilla"**

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

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**

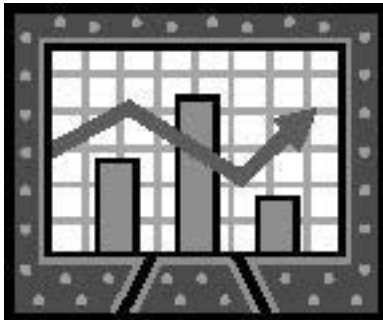
- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. A    B    C    D  | 26. T    F           | 51. A    B    C    D |
| 2. A    B    C    D  | 27. T    F           | 52. A    B    C    D |
| 3. A    B    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 7 & 8

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

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## Europe

1. Which of the following cities is in Finland and closest to the Arctic Circle?
  - a. Lahti
  - b. Bodo
  - c. Mo i Rana
  - d. Kem
2. The Caucasus Mountains form a boundary between Russia and what other country?
  - a. Armenia
  - b. Turkey
  - c. Georgia
  - d. Iran
3. Which country gets about half of its electricity from geothermal power?
  - a. Finland
  - b. Austria
  - c. Spain
  - d. Iceland
4. Which country is the most densely populated?
  - a. Russia
  - b. Spain
  - c. United Kingdom
  - d. Monaco
5. Which country is located southwest of Hungary?
  - a. Slovakia
  - b. Croatia
  - c. Romania
  - d. Ukraine
6. Which country is not part of the Iberian Peninsula?
  - a. Italy
  - b. Andorra
  - c. Spain
  - d. Portugal
7. What body of water is located between the British Isles and continental Europe?
  - a. Caspian Sea
  - b. Barents Sea
  - c. North Sea
  - d. Balearic Sea
8. In which country is there a region that receives over 80 inches of annual precipitation?
  - a. Russia
  - b. Spain
  - c. Poland
  - d. Norway
9. What Italian city with a population of over one million is closest to the Italian capital?
  - a. Perugia
  - b. Turin
  - c. Naples
  - d. Palermo
10. What is the approximate distance from Athens to Istanbul?
  - a. About 200 miles
  - b. About 350 miles
  - c. About 500 miles
  - d. About 700 miles
11. The island of Bornholm is a territory of what country?
  - a. Denmark
  - b. Russia
  - c. Ireland
  - d. Spain
12. What is the highest mountain peak in Europe?
  - a. Mount Blanc
  - b. Mount Elbrus
  - c. Mount Matterhorn
  - d. Mount Etna
13. Which country is shown to have coal resources?
  - a. Ireland
  - b. Germany
  - c. Finland
  - d. Belarus
14. Which of the following small countries isn't in a mild climate zone?
  - a. Vatican City
  - b. Monaco
  - c. Liechtenstein
  - d. San Marino
15. What is the main climate type in western Norway?
  - a. Cool Summer
  - b. Tundra
  - c. Marine
  - d. Subarctic



# BEACH FITNESS COMPLEX

Hours: Weekdays 8am to 8 pm

Weekends 8am to 10pm

Group Fitness Schedule:

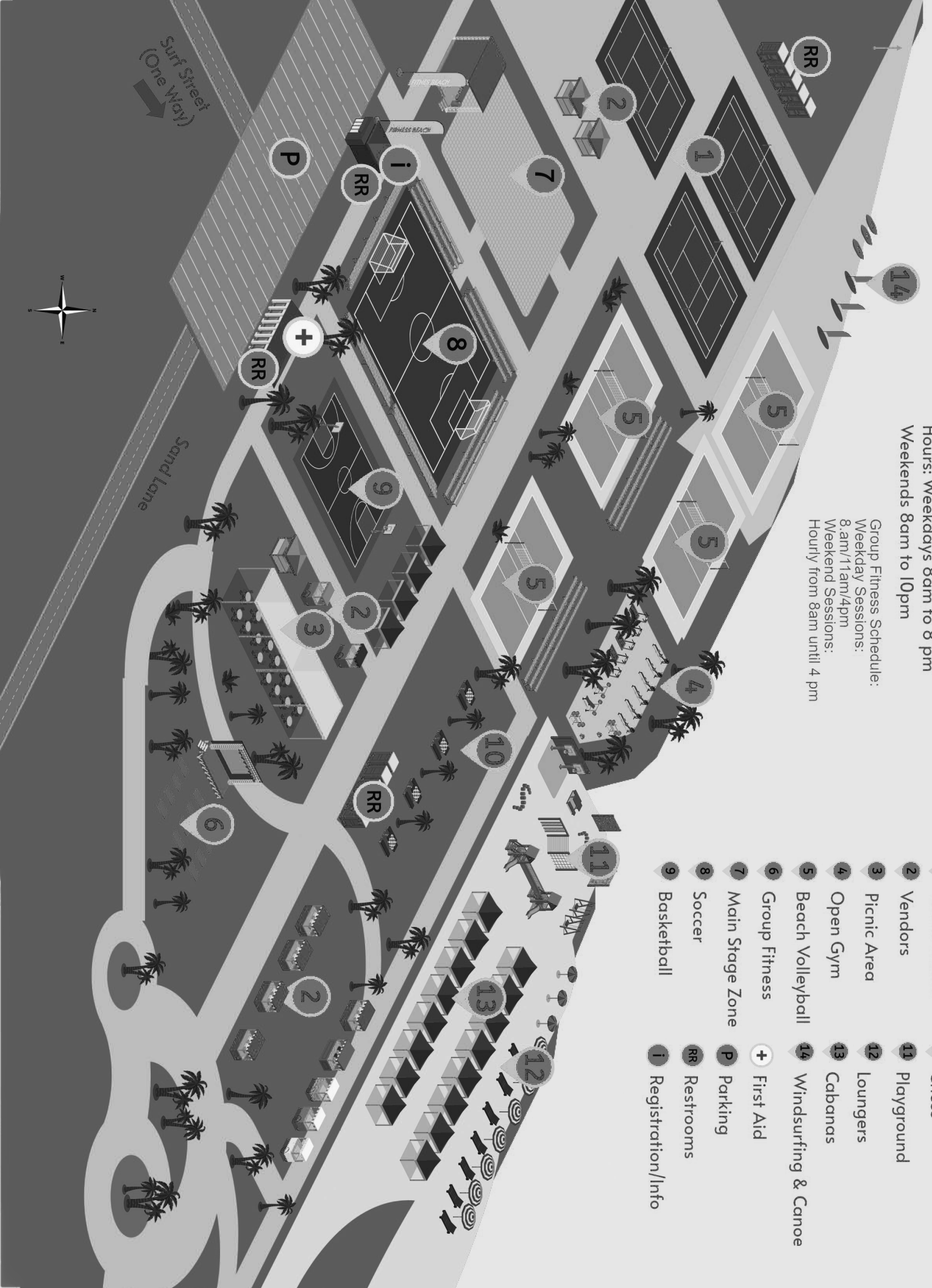
Weekday Sessions:

8 am/11 am/4 pm

Weekend Sessions:

Hourly from 8am until 4 pm

- 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. What time does the Beach Fitness Complex open on weekdays?

- a. 7am
- b. 8am
- c. 9am
- d. 10am

17. Which facility is located directly to the north of the soccer field?

- a. Tennis courts
- b. Group fitness
- c. Basketball
- d. Beach volleyball

18. In what part of the map is windsurfing and canoeing located?

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

19. Which facility is closest to registration/info?

- a. Group fitness
- b. Playground
- c. Vendors
- d. Soccer

20. Which area is labeled with the letter "P"?

- a. Parking
- b. Playground
- c. Picnic Area
- d. Pool

21. Coming to the complex via Sand Lane, you would be approaching from what direction?

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

22. At what time is a group fitness class available on Saturday?

- a. 8am
- b. 10am
- c. 3pm
- d. All of the above

23. How many vendor huts are carts are indicated on the map?

- a. 2
- b. 7
- c. 9
- d. 14

24. How many roads can you take to leave the facility?

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

25. Which of the following are not located on the beach?

- a. Loungers
- b. Windsurfing and canoe
- c. Tennis courts
- d. Cabanas

### TRUE/FALSE

26. There are more tennis courts than beach volleyball courts.

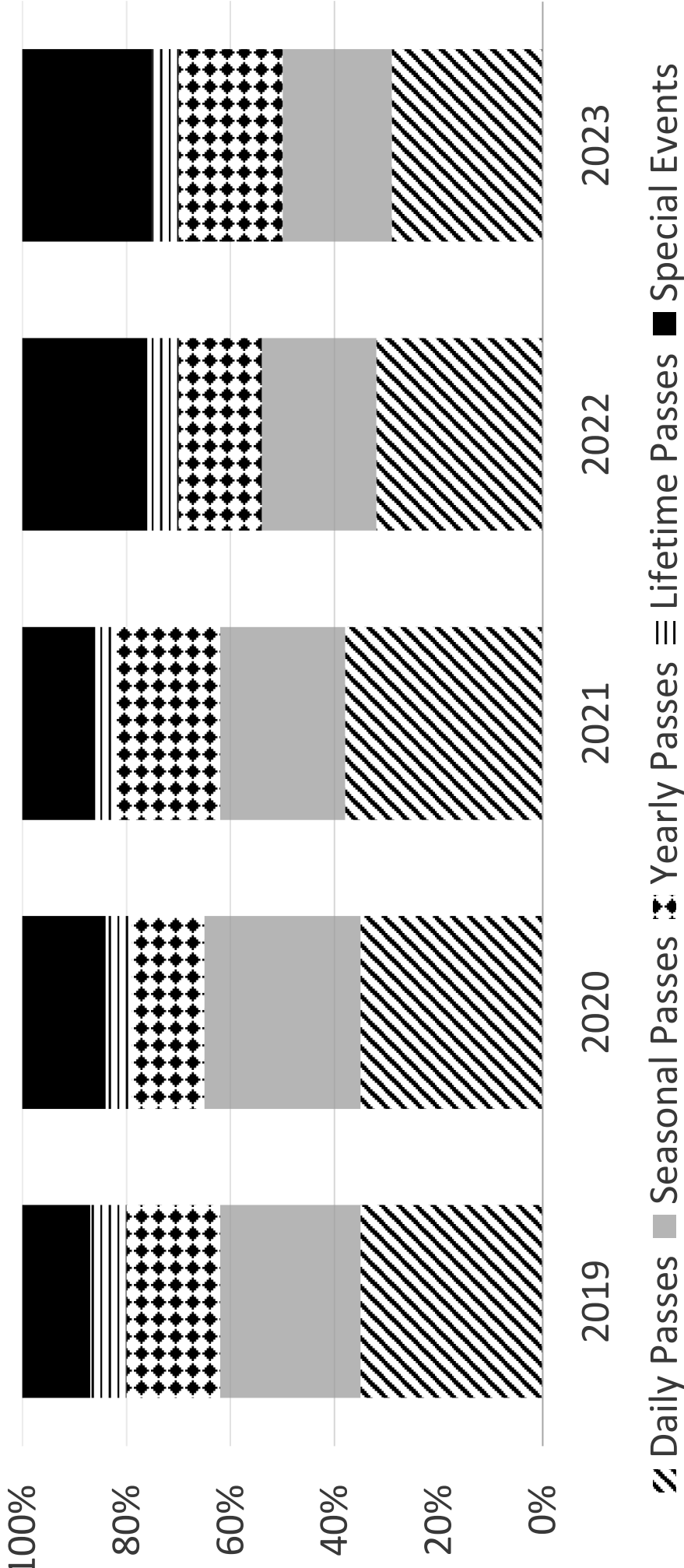
27. The Beach Fitness Complex is open from 8am to 10pm on weekends.

28. The playground is located next to the cabanas.

29. There is only one restroom area in the complex.

30. The lifeguard station is located next to the loungers.

# PERCENTAGE OF PASS SALES BY TYPE



## Percentage of Pass Sales by Type

31. Which pass type had the highest percentage of sales in 2019?
- Daily passes
  - Seasonal passes
  - Yearly passes
  - Lifetime passes
32. In which year did special events have the highest percentage?
- 2020
  - 2021
  - 2022
  - 2023
33. What was the difference in percentage points between daily passes and seasonal passes in 2020?
- 1
  - 5
  - 10
  - 15
34. Which pass type showed the most significant fluctuation over the five-year period?
- Seasonal passes
  - Special event passes
  - Daily passes
  - Yearly passes
35. How many pass types increased in percentage share every year shown on the graph?
- 0
  - 1
  - 2
  - 3
36. In which year did daily passes and special events have the closest percentages?
- 2023
  - 2022
  - 2021
  - 2020
37. What was the total percentage of all pass types combined in 2021?
- 98%
  - 99%
  - 100%
  - 101%
38. How many pass types reached their lowest percentage in 2020?
- 0
  - 1
  - 2
  - 3
39. In what year did special event passes have the biggest jump compared to the previous year?
- 2020
  - 2021
  - 2022
  - 2023
40. In how many years were the combined percentage of daily and seasonal pass sales greater than 60%?
- 1
  - 2
  - 3
  - 4
- TRUE/FALSE**
41. Seasonal passes held the second highest percentage of pass sales every year.
42. The percentage of daily passes was always at least 10 percentage points higher than any other pass type.
43. At least one pass type maintained the same percentage for two consecutive years.
44. Yearly passes showed an overall increasing trend from 2019 to 2023.
45. The graph shows that daily passes brought in the most revenue every year.

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## World

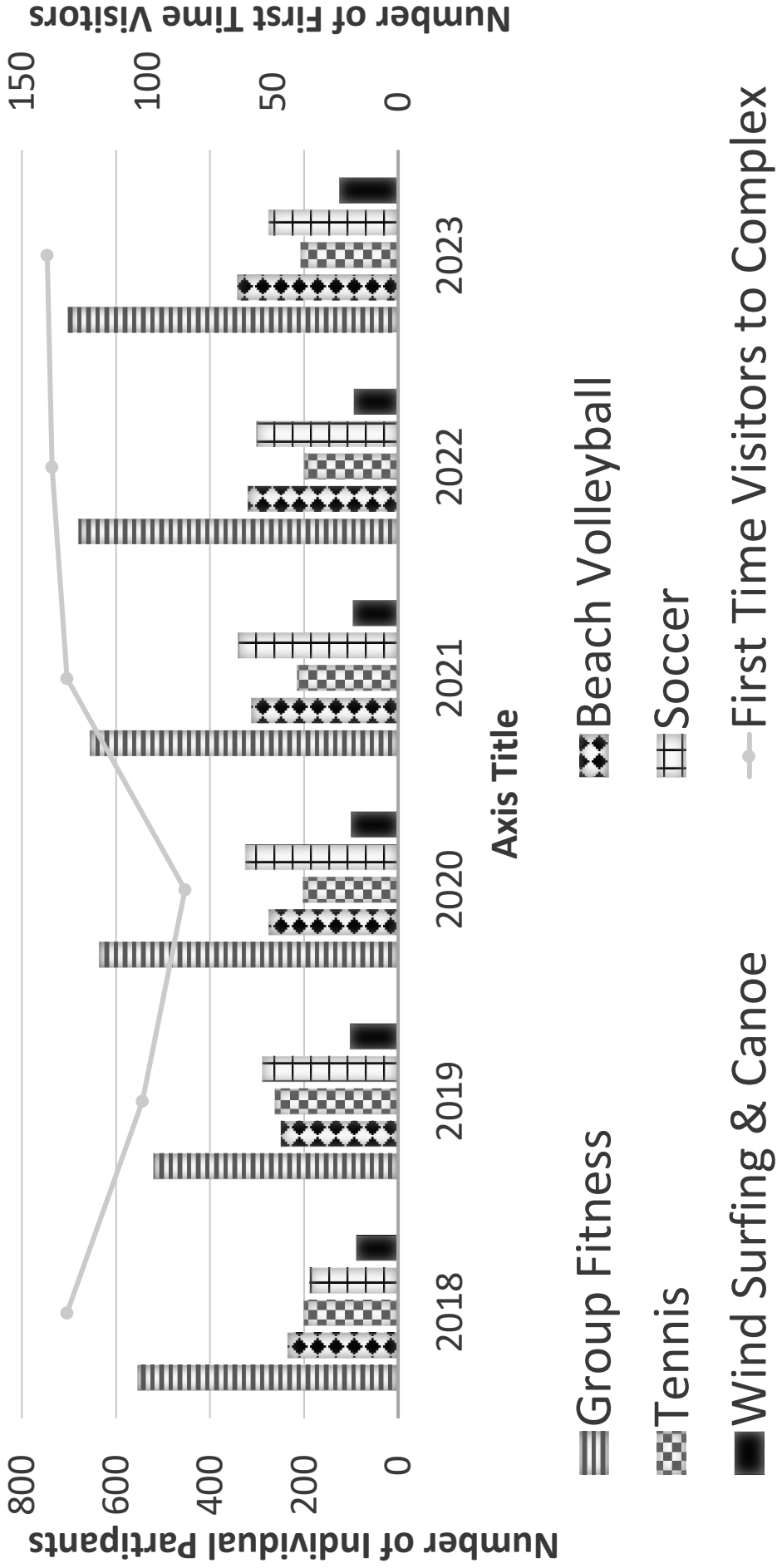
46. Which of the following countries is the top producer of iron?
- China
  - Mexico
  - Chile
  - Australia
47. The Ural Mountains help form what kind of border?
- International
  - Continental
  - State or Province
  - None of the above
48. The highest elevations can be found in what part of South America?
- Northern
  - Southern
  - Eastern
  - Western
49. What country has the longest life expectancy?
- United States
  - United Kingdom
  - Sweden
  - Monaco
50. Deserts and semi-deserts are typically used for what?
- Nomadic herding
  - Subsistence farming
  - Ranching
  - Forestry
51. Which continent is the second most populated?
- Europe
  - North America
  - Africa
  - Asia

52. Which country does not border Lake Victoria?
- Kenya
  - Sudan
  - Uganda
  - Tanzania
53. A low area surrounded by higher ground describes what?
- Mountains
  - Plateaus
  - Basins
  - Plains
54. How far is it from the African mainland to Madagascar?
- About 100 miles
  - About 250 miles
  - About 500 miles
  - About 750 miles
55. The Gobi Desert is located in what country?
- Mongolia
  - Russia
  - Iran
  - Kenya

## TRUE/FALSE

56. The Gulf of Alaska is located just north of Anchorage.
57. Polar sea ice is more abundant in Antarctica than the Arctic.
58. A high risk of earthquakes zone can be found along the western area of North America.
59. The longest mountain chain in the world runs through Argentina.
60. Goiania, Brazil gets its highest amount of precipitation in December.

# NUMBER OF INDIVIDUAL PARTICIPANTS PER ACTIVITY AND NUMBER OF FIRST TIME VISITORS



## Number of Individual Participants Per Activity and Number of First Time Visitors

61. In which year did group fitness have the highest number of participants?
- 2020
  - 2021
  - 2022
  - 2023
62. Which activity showed the most consistent growth from 2018 to 2023?
- Group Fitness
  - Beach Volleyball
  - Tennis
  - Soccer
63. In which year was the difference between group fitness and beach volleyball participants the smallest?
- 2018
  - 2019
  - 2020
  - 2021
64. How many activities had their highest number of participants in 2023?
- 0
  - 1
  - 2
  - 3
65. What span of time does the chart cover?
- Six months
  - One year
  - Six years
  - Not indicated
66. Which activity had the largest single-year increase in participants?
- Group fitness
  - Beach volleyball
  - Tennis
  - Soccer

67. How many activities' participation peaked in 2021?
- 0
  - 1
  - 2
  - 3
68. What year had the highest number of total participants?
- 2020
  - 2021
  - 2022
  - 2023
69. What does the y-axis on the right represent?
- The year
  - Number of participants
  - Number of first time visitors
  - None of the above
70. What year saw the lowest number of first time visitors?
- 2018
  - 2019
  - 2020
  - 2021

### TRUE/FALSE

71. Group fitness experienced a decrease in participants from 2018 to 2019, but then increased every year after that.
72. The combined number of participants in tennis and wind surfing & canoe never exceeded 400 in any year.
73. Tennis was the only activity that had fewer participants in 2023 than in 2018.
74. The total number of participants for all activities combined was highest in 2023.
75. The line on the graph represents the total number of participants across all activities.



**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ MAPS/GRAPHS/CHARTS  
INVITATIONAL TEST – GRADES 7 & 8**

**Answer Key**

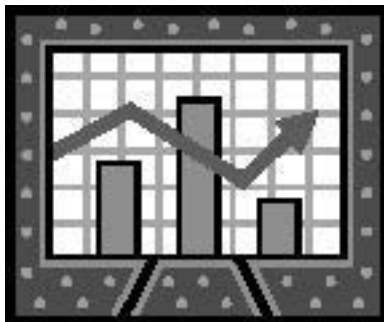
1. A	26. F	51. C
2. C	27. T	52. B
3. D	28. T	53. C
4. D	29. F	54. B
5. B	30. F	55. A
6. A	31. A	56. F
7. C	32. D	57. F
8. D	33. B	58. T
9. C	34. B	59. T
10. B	35. A	60. T
11. A	36. A	61. D
12. B	37. C	62. B
13. B	38. B	63. B
14. C	39. C	64. D
15. C	40. C	65. C
16. B	41. F	66. A
17. D	42. F	67. B
18.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

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Maps, Graphs & Charts

grades 7 & 8

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

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## Asia

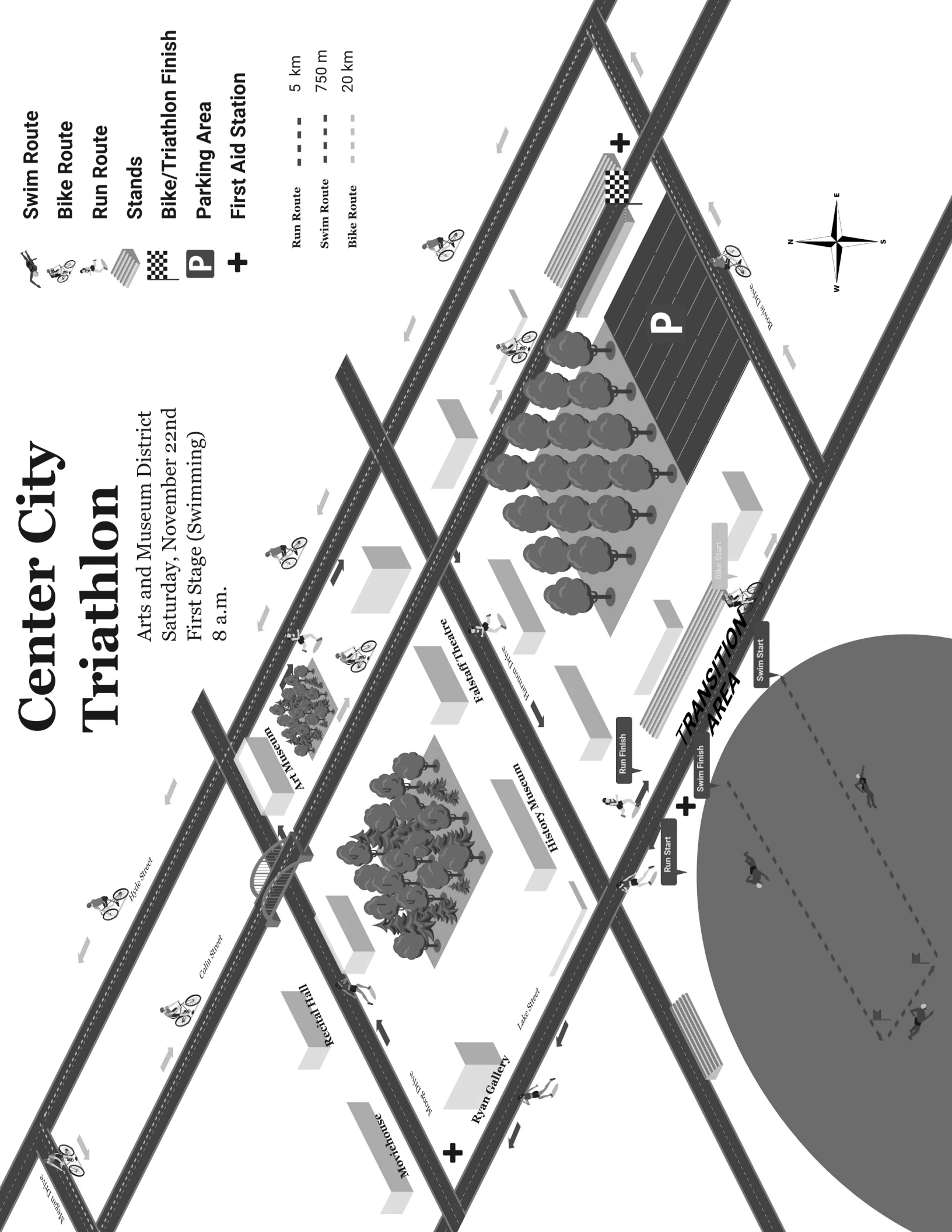
1. Which has the highest population growth?
  - a. China
  - b. India
  - c. Laos
  - d. World
2. Where is the largest island in Asia located?
  - a. Northeast of Oman
  - b. Northwest of Turkey
  - c. Southwest of Japan
  - d. Southeast of Vietnam
3. How many capitals does Pakistan have?
  - a. 0
  - b. 1
  - c. 2
  - d. 3
4. What is the predominant belief in Bangladesh?
  - a. Judaism
  - b. Hinduism
  - c. Christianity
  - d. Islam
5. Which city in Kazakhstan has the highest population?
  - a. Ufa
  - b. Almaty
  - c. Kulsary
  - d. Oral
6. Commander Island is a territory of what country?
  - a. India
  - b. Russia
  - c. Japan
  - d. Indonesia
7. Which nation has a disputed border with China?
  - a. Russia
  - b. Taiwan
  - c. India
  - d. Kyrgyzstan
8. Which of the following mountain peaks is closest to Mt. Everest?
  - a. About 1,000 feet
  - b. About 5,000 feet
  - c. About 17,000 feet
  - d. About 24,000 feet
9. Which of the following countries does not have shores on the Caspian Sea?
  - a. Russia
  - b. Iran
  - c. Tajikistan
  - d. Turkmenistan
10. Excluding Russia, which country's mainland reaches the farthest north?
  - a. Japan
  - b. Kazakhstan
  - c. China
  - d. Mongolia
11. During the dry monsoon season, winds come through India from what direction?
  - a. North
  - b. South
  - c. East
  - d. West
12. Which Russian city is surrounded by tundra?
  - a. Barnaul
  - b. Vladivostok
  - c. Tiksi
  - d. None of the above
13. How far is it from the capital of Syria to the capital of Iraq?
  - a. About 100 miles
  - b. About 150 miles
  - c. About 300 miles
  - d. About 500 miles
14. What is the vertical exaggeration of the cross section of the elevation map?
  - a. 52 to 1
  - b. 64 to 1
  - c. 77 to 1
  - d. Not indicated
15. Gold can be found in which country?
  - a. Nepal
  - b. South Korea
  - c. Lebanon
  - d. All of the above

# Center City Triathlon

Arts and Museum District  
Saturday, November 22nd  
First Stage (Swimming)  
8 a.m.

- Swim Route
- Bike Route
- Run Route
- Stands
- Bike/Triathlon Finish
- Parking Area
- First Aid Station

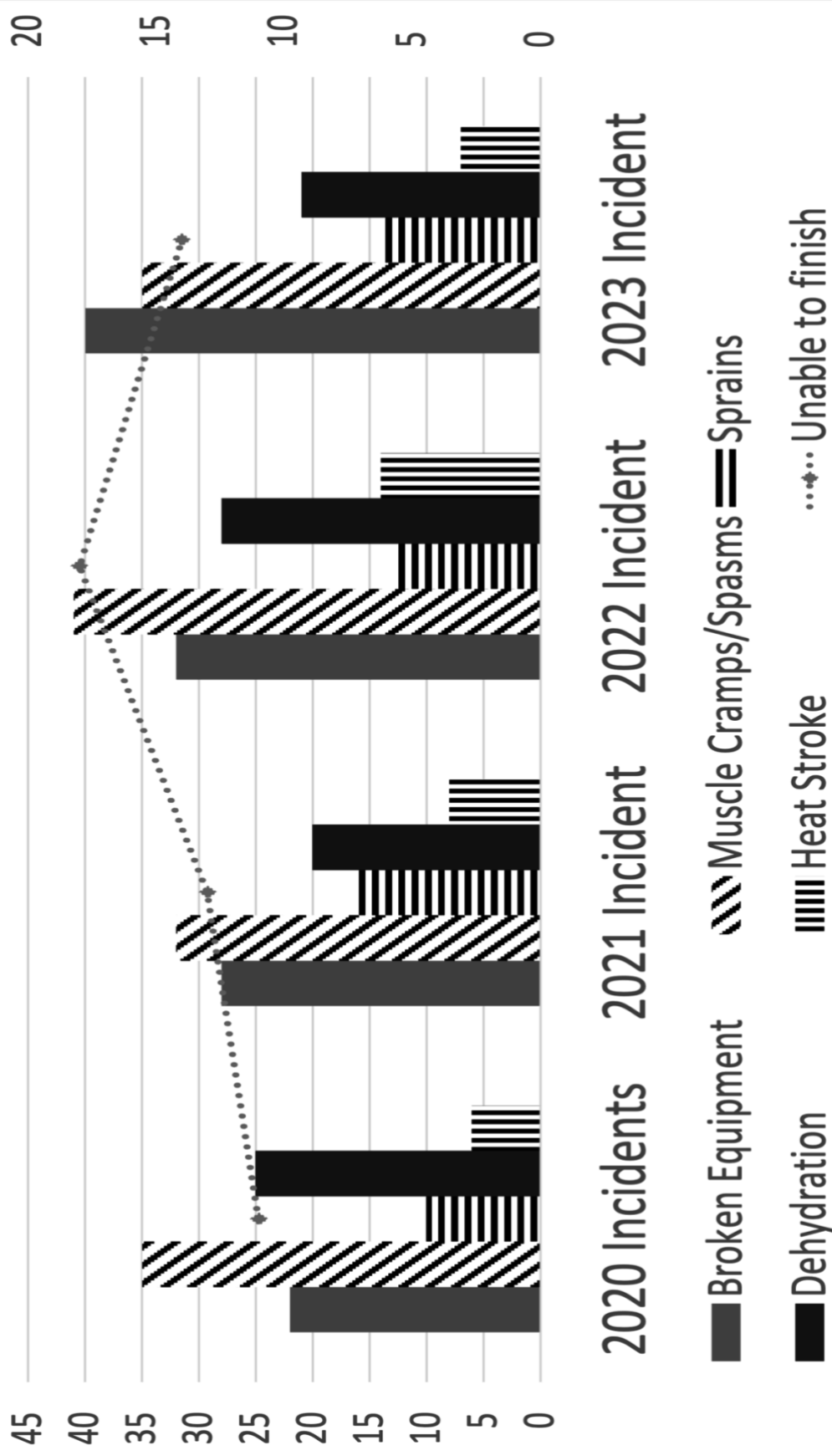
- Run Route 5 km
- Swim Route 750 m
- Bike Route 20 km



## Center City Triathlon

16. Which building is located closest to the swim start?
- Art Museum
  - History Museum
  - Recital Hall
  - Moviehouse
17. What is the first leg of the triathlon?
- Running
  - Swimming
  - Biking
  - Not indicated
18. How many first aid stations are shown on the map?
- 0
  - 2
  - 3
  - 4
19. Which event starts the furthest west?
- Running
  - Swimming
  - Biking
  - Not indicated
20. Which of these is NOT part of the Arts and Museum District as shown?
- Recital Hall
  - Science Hall
  - History Museum
  - Ryan Gallery
21. What direction do runners go on Hyde Street?
- Southwest
  - Northwest
  - Northeast
  - Southeast
22. The parking area is accessible from what road?
- Hyde Street
  - Harmon Drive
  - Megan Drive
  - Bowie Drive
23. Which event in the triathlon has the longest route?
- Running
  - Swimming
  - Biking
  - They are all the same length
24. How many legs of the event pass north of the Art Museum?
- 0
  - 1
  - 2
  - 3
25. How many one way streets/drives are indicated on the map?
- 0
  - 1
  - 2
  - 3
- TRUE/FALSE**
26. The bike route is more than twice as long as the run route.
27. The transition area is where all events start and finish.
28. The event begins with swimming at 8 a.m. on Sunday.
29. The event finishes just north of the parking area.
30. There are an equal number of spectator stands shown along the bike route and the run route.

# Triathlon Incidents Report



## Triathlon Incidents Report

31. What does the y-axis on the right side indicate?
- Number of incidents
  - Number of contestants unable to finish event
  - The year
  - Not indicated
32. What is the total number of years covered in the data?
- 1
  - 2
  - 3
  - 4
33. In what year did Broken Equipment incidents reach their peak?
- 2020
  - 2021
  - 2022
  - 2023
34. What incident increased in occurrences every year?
- Sprains
  - Dehydration
  - Heat Stroke
  - Broken Equipment
35. In how many years did sprains happen more often than incidents of heat stroke?
- 0
  - 1
  - 2
  - 3
36. What does the darkest column represent?
- 2023
  - 2022
  - 2021
  - None of the above
37. In which year was the difference between Broken Equipment and Muscle Cramps/Spasms incidents the smallest?

- 2021
  - 2022
  - 2023
  - Not indicated
38. In what year was the total number of incidents (across all types) the highest?
- 2020
  - 2021
  - 2022
  - 2023
39. What is the total number of Heat Stroke incidents across all four years?
- 25
  - 30
  - 35
  - 40
40. Which two incident types have the same number of occurrences in 2023?
- Sprains and Heat Stroke
  - Muscle Cramps/Spasms and Dehydration
  - Broken Equipment and Dehydration
  - None of the above

### TRUE/FALSE

41. The year with the highest incidence of dehydration coincided with the year the most contestants were listed as unable to finish.
42. 2020 was the year with the least amount of combined incidents.
43. The number of heat strokes doubled from 2022 to 2023.
44. The number of sprain incidents showed the least amount of variation across the four years.
45. 2022 was the peak year for incidents of all kinds combined as well as the peak number for contestants unable to finish.

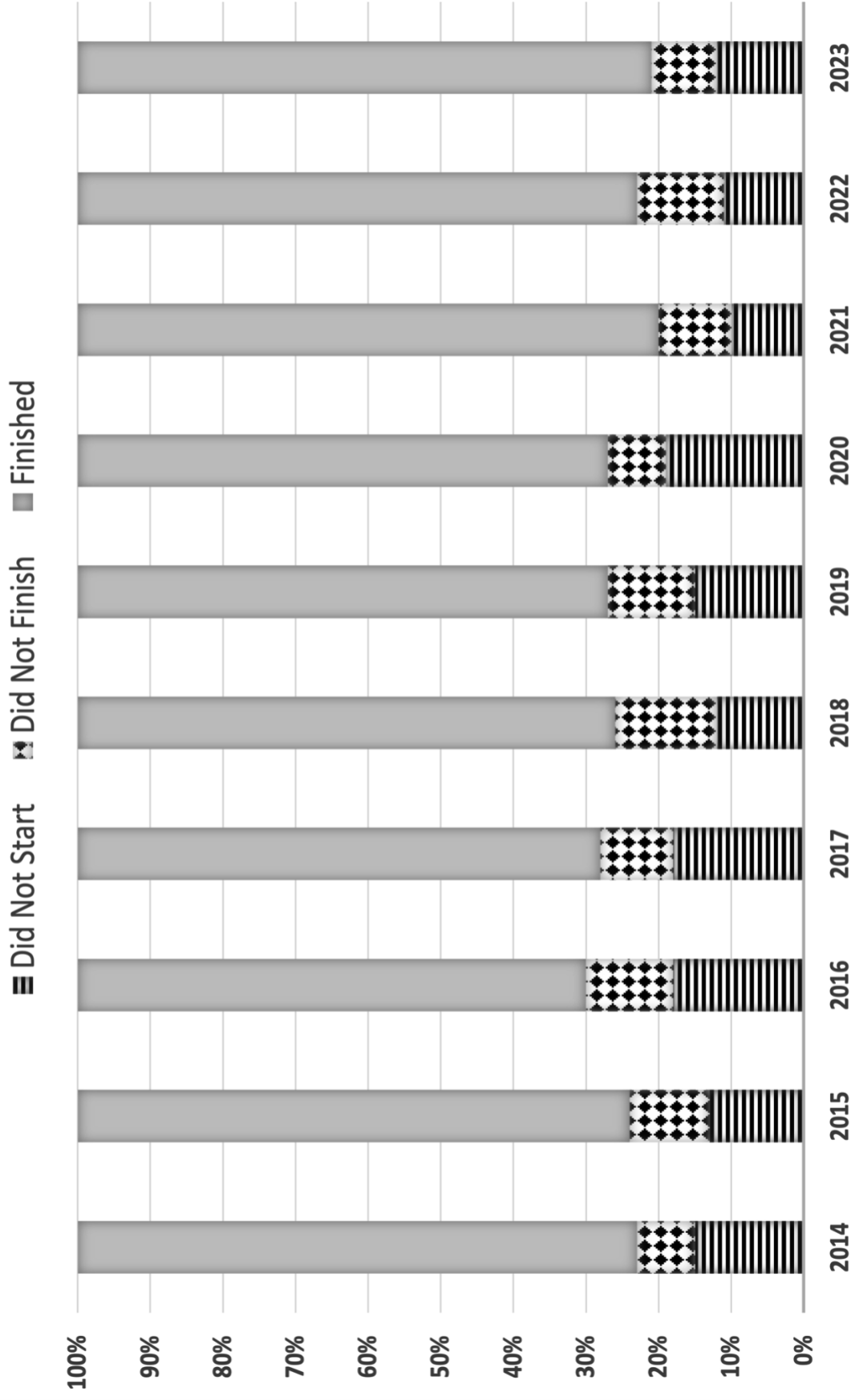


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## South America

46. The land cover in Suriname is of what kind?
- Grassland
  - Cropland
  - Tropical rain forest
  - Broadleaf forest
47. Where are most of South America's aluminum deposits located?
- Andes Mountains
  - Northwest
  - Northeast
  - Brazilian Highlands
48. Which of the following countries has a capital north of the Tropic of Capricorn?
- Uruguay
  - Argentina
  - Bolivia
  - Chile
49. What does the line of white circles on the Northwestern South America map indicate?
- International boundary
  - State boundary
  - Small country
  - Continental boundary
50. Which of the following can be grown at the highest elevation?
- Rice
  - Cacao
  - Barley
  - Coffee
51. Of the following, which Brazilian city with a population between 500,000 and 1,000,000 is nearest the Equator?
- Macapa
  - Imperatriz
  - Natal
  - Belem
52. Wetlands can be found in which of the following countries?
- Peru
  - Paraguay
  - Colombia
  - All of the above
53. Which of the following rivers forms a boundary between Colombia and Venezuela?
- Purus River
  - Beni River
  - Meta River
  - None of the above
54. In which country is the Pampas located?
- Venezuela
  - Guyana
  - Chile
  - Argentina
55. The Gulf of San Jorge is located off the coast of what country?
- Argentina
  - Brazil
  - Venezuela
  - Ecuador
- TRUE/FALSE**
56. Ranching is common in Venezuela.
57. Cali, Colombia, has a larger population than Arequipa, Peru.
58. Argentina has two capitals.
59. Colombia is the most densely populated country on the continent.
60. Paraguay gets more rainfall than French Guiana.

2023 DNS AND DNF RATES AS A PERCENTAGE OF REGISTERED ENTRANTS



## 2023 DNS and DNF Rates as a Percentage of Registered Entrants

61. In which year was the percentage of "Did Not Start" participants highest?

- a. 2018
- b. 2019
- c. 2020
- d. 2021

62. Which year had the closest percentages for "Did Not Start" and "Did Not Finish"?

- a. 2014
- b. 2016
- c. 2018
- d. 2021

63. In which of the following years did the highest percentage of registrants finish the triathlon?

- a. 2015
- b. 2017
- c. 2018
- d. 2021

64. In how many years did the total percentage of all registrants equal 100%?

- a. 0
- b. 5
- c. 10
- d. None of the above

65. What was the main reason that participants that started the triathlon did not end up finishing?

- a. Equipment issues
- b. Heat related problems
- c. Strains or breaks
- d. Not indicated

66. In how many years did the "Did Not Finish" percentage exceed the "Did Not Start" percentage?

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

67. What year did the percentage of "Did Not Finish" increase the most compared to the previous year?

- a. 2017
- b. 2018
- c. 2019
- d. 2020

68. How many individuals finished the race in 2015?

- a. 23
- b. 77
- c. 100
- d. Not indicated

69. In how many years was the "Did Not Start" percentage exactly 15%?

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

70. How many years of data is show in the graph?

- a. 1
- b. 9
- c. 10
- d. Not indicated

### TRUE/FALSE

71. "Did Not Finish" percentages mostly stayed at 10% or above.

72. The "Finished" percentage never dropped by more than 10% from one year to the next.

73. The highest combined percentage of "Did Not Start" and "Did Not Finish" occurred in 2016.

74. Registrants that finished the event stayed above 75% every year.

75. The lowest "Finished" percentage occurred in the same year as the highest "Did Not Start" percentage.

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ MAPS/GRAPHS/CHARTS  
FALL/WINTER DISTRICT TEST – GRADES 7 & 8**

**Answer Key**

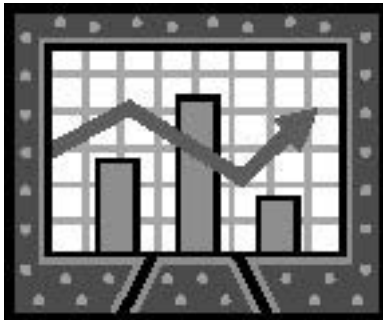
1. C	26.T	51.C
2. D	27.F	52.D
3. B	28.F	53.C
4. D	29.T	54.D
5. B	30.F	55.A
6. B	31.B	56.T
7. C	32.D	57.T
8. C	33.D	58.F
9. C	34.D	59.F
10.B	35.D	60.F
11.A	36.D	61.C
12.C	37.A	62.D
13.D	38.C	63.D
14.B	39.C	64.C
15.B	40.D	65.D
16.B	41.T	66.C
17.B	42.T	67.B
18.C	43.F	68.D
19.A	44.T	69.B
20.B	45.T	70.C
21.D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

**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Maps, Graphs & Charts

grades 7 & 8

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

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## Australia & Oceania

1. In which country is the largest urban area in Australia & Oceania located?
  - a. Indonesia
  - b. Australia
  - c. New Zealand
  - d. Philippines
2. In what state is the Australian capital located?
  - a. South Australia
  - b. Western Australia
  - c. Canberra
  - d. New South Wales
3. If it is Tuesday in Honolulu, Hawaii, what day is it on Wellington, New Zealand?
  - a. Monday
  - b. Tuesday
  - c. Wednesday
  - d. Thursday
4. What resource can be found on New Caledonia?
  - a. Tin
  - b. Nickel
  - c. Copper
  - d. Gold
5. What is the predominant culture of the people living in the Solomon Islands?
  - a. Micronesian
  - b. Melanesian
  - c. Aborigine
  - d. Polynesian
6. What country's capital is closest to the equator?
  - a. Australia
  - b. Philippines
  - c. Malaysia
  - d. Cambodia
7. About how far is Sydney from the center of the Great Barrier Reef?
  - a. < 250 miles
  - b. 750 miles
  - c. 2000 miles
  - d. 1500 miles
8. Australia's Barossa Valley produces about what percent of the country's wine?
  - a. < 20%
  - b. > 20%
  - c. 50%
  - d. >50%
9. The Daito Islands are a territory of what country?
  - a. Kiribati
  - b. Australia
  - c. Palau
  - d. Japan
10. What city in New Zealand can be found at 36.99° S, 174.87° E?
  - a. Dunedin
  - b. Manukau
  - c. Wellington
  - d. None of the above
11. What body of water separates the Australian mainland from Tasmania?
  - a. Gulf of Carpentaria
  - b. Bass Strait
  - c. Arafura Sea
  - d. Torres Strait
12. What is the land cover type in the Western Plateau of Australia?
  - a. Cropland
  - b. Grassland
  - c. Semi-desert & desert
  - d. Broadleaf forest
13. The Mekong River runs through which of the following countries?
  - a. Laos
  - b. Thailand
  - c. Cambodia
  - d. All of the above
14. Which of the following cities in Australia has the largest population?
  - a. Gosford
  - b. Albany
  - c. Katherine
  - d. Bundaberg
15. Where is the Great Dividing Range located?
  - a. East Australia
  - b. West Australia
  - c. North Indonesia
  - d. South Indonesia

Spring 7/8 2024-2025



# Upstate

## Renaissance Faire

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



Sanchez Road

Interstate Highway 45

20 Miles to Bryce

Turn to Market Road 3

15 Miles to San Torres

(10 Miles to New Heights)

Blake Road

-  First Aid
-  Parking
-  Information
-  Rest Rooms

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

Tickets available in information booth:

\* One ticket ride/attraction

\*\* Two ticket ride attraction

Musical Acts begin every hour from

11 a.m. until 10 p.m.

Theatre performances every other hour

beginning at noon.

(See website for performance/artists details)

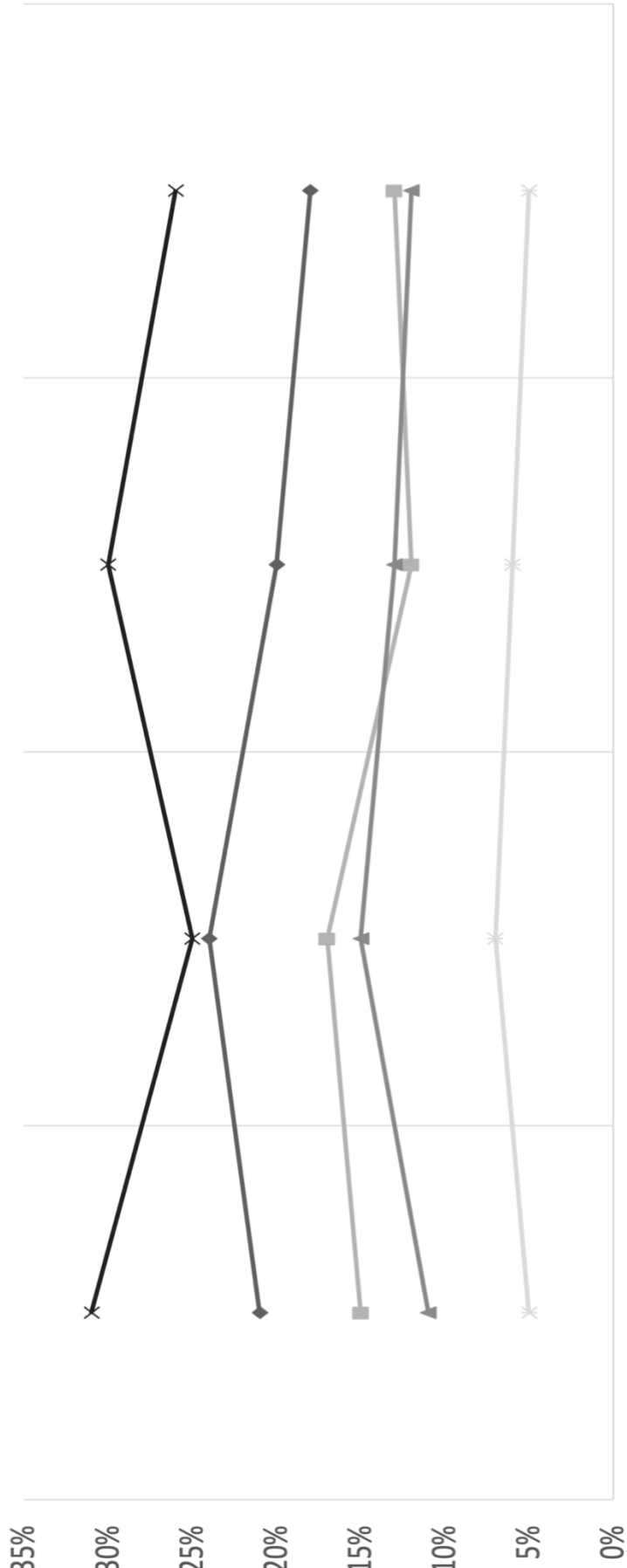
Jousting Tournaments begin 3 and 6.

## Upstate Renaissance Faire

16. What time does the last musical act begin?
- 10 a.m.
  - 12 p.m.
  - 10 p.m.
  - 11 p.m.
17. Which of the following is the most centrally located on the map?
- Maypole
  - Bouncy Castle
  - Pony Ride
  - Fencing Area
18. Which road runs directly northwest of the faire site?
- FM 3
  - Blake Road
  - Sanchez Road
  - None of the above
19. For which event is its legend number partially obscured on the map?
- Pony Rides
  - Dragonboat
  - Horse Barn
  - Wizard's Tent
20. How many first aid stations are located on the map?
- 0
  - 1
  - 2
  - 3
21. Where can you find the Music Stage?
- Near the Archery area
  - Next to the Jousting Arena
  - By the Minotaur Maze
  - Adjacent to the Ferris Wheel
22. How many theatre performances happen in a single day?
- 2
  - 4
  - 6
  - Not indicated
23. Which of these is NOT a two-ticket ride attraction?
- Ferris Wheel
  - Bouncy Castle
  - Fencing Area
  - Dragonboat
24. Where can visitors buy tickets for the rides?
- Food Trucks
  - At each ride/attraction
  - Information booth
  - Not indicated
25. Which attraction/ride is located the furthest north?
- Minotaur Maze
  - Archery
  - Swing Boat
  - Wizard's Tent
- TRUE/FALSE**
26. The market areas are located in the far south and far north of the faire grounds.
27. The Renaissance Faire is open every weekend from September through October.
28. Blake Road intersects with Farm to Market Road 3.
29. There are more musical performances daily than daily theatre performances and jousting tournaments combined.
30. The map shows a dedicated area for costume rentals.

# MONTHLY PARTICIPATION RATES OF FAIRE ACTIVITIES AND RIDES IN 2023

Maze Archery Fencing Carousel Pony Ride



## Monthly Participation Rates of Faire Activities and Rides

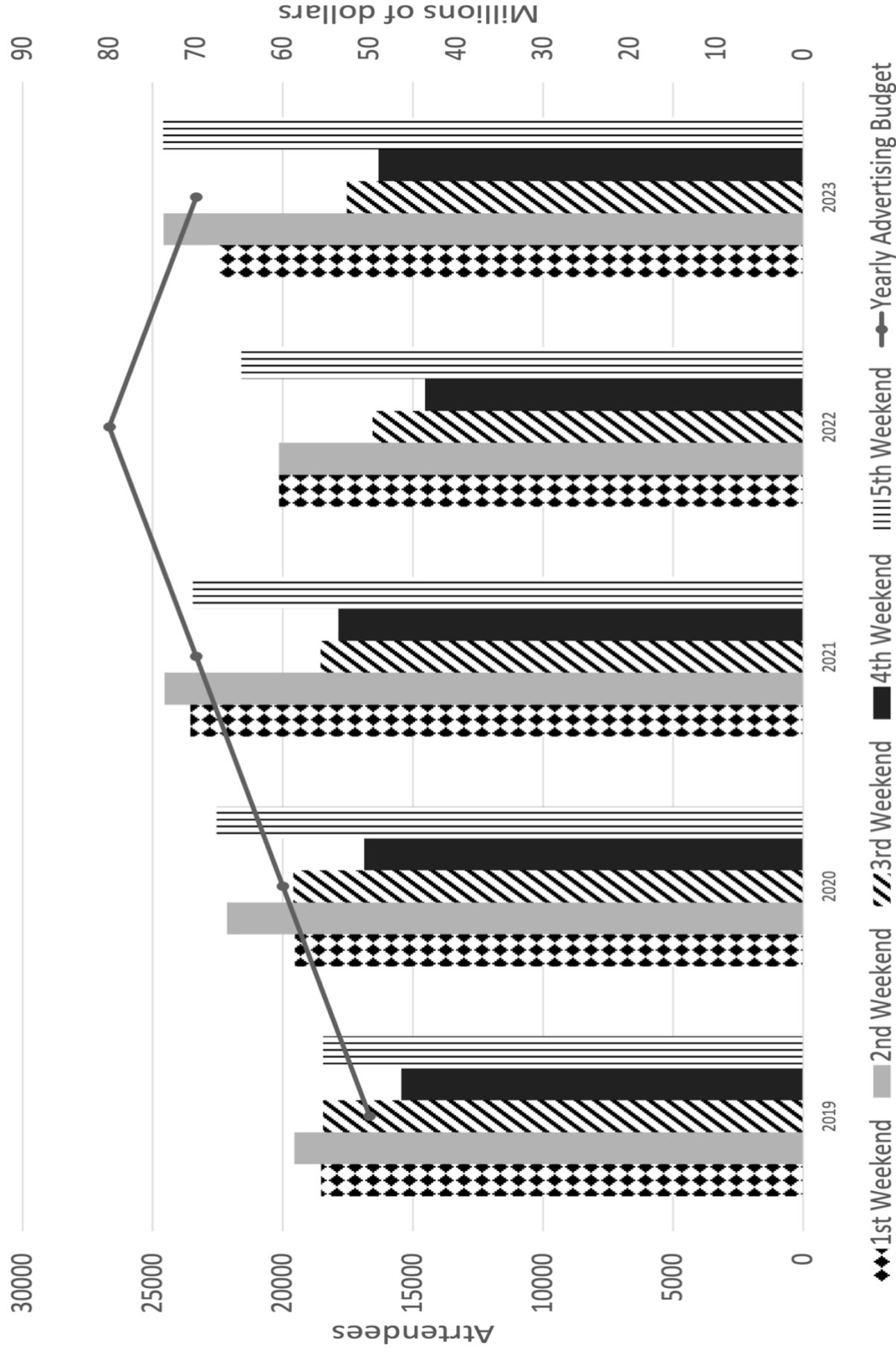
31. What activity had the highest percentage in September?
- Maze
  - Archery
  - Fencing
  - Carousel
32. Which activity had a higher percentage in December compared to November?
- Maze
  - Archery
  - Fencing
  - None of the above
33. How many of the attendees participated in both archery and fencing?
- 26%
  - 74%
  - 4%
  - Not indicated
34. Which activity had the same percentage in September and December?
- Maze
  - Archery
  - Fencing
  - None of the above
35. Which ride activity had the highest amount of participation across all months?
- Maze
  - Carousel
  - Pony ride
  - Fencing
36. What was the difference in percentage points between the most popular and least popular rides/activity in November?
- 13%
  - 21%
  - 18%
  - 24%
37. In how many months did a higher percentage of attendees participate in fencing compared to archery?
- 0
  - 1
  - 2
  - 3
38. In what month did the percentage of attendees riding the carousel fall the most compared to the previous month?
- October
  - November
  - December
  - Not indicated
39. What does the line with an x indicate?
- September
  - December
  - November
  - None of the above
40. Which activity's percentage increased from September to October?
- Maze
  - Archery
  - Fencing
  - All of the above
- TRUE/FALSE**
41. Pony rides had the lowest percentage every month.
42. The graph covers five years of data.
43. The maze attracted exactly the same percentage of visitors in September and November.
44. Most rides/activities had their highest percentage in September.
45. The pony ride's percentage fluctuated the least among all the rides/activities.

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## South America

46. Which Brazilian city with a population of over one million is located on Brazil's eastern coast?
- Goiania
  - Natal
  - Recife
  - Manaus
47. What is the elevation of the city of Buenos Aires, Argentina?
- 0 to 500 feet
  - 500 to 1,000 feet
  - 1,000 to 2,000 feet
  - 2,000 to 5,000 feet
48. Which of the following has the highest birth rate?
- Bolivia
  - Brazil
  - Peru
  - World
49. What country has two capitals?
- Suriname
  - Venezuela
  - Chile
  - Bolivia
50. Waterfalls are indicated on which of the following rivers?
- Xingu River
  - Abuna River
  - Tapajos River
  - All of the above
51. Where are the Guiana Highlands located?
- Venezuela
  - Uruguay
  - Peru
  - None of the above
52. How many species of organisms disappear every day due to deforestation?
- 0
  - About 45
  - About 95
  - About 135
53. The Strait of Magellan cuts through what country?
- Chile
  - Ecuador
  - Brazil
  - None of the above
54. Which of the following islands is a territory of Chile?
- Trindade
  - Malpelo
  - Cocos
  - None of the above
55. What group of indigenous inhabitants are present in Chile?
- Goajiro
  - Quechua
  - Mapuche
  - All of the above
- TRUE/FALSE**
56. Argentina has a disputed border with Chile.
57. Wetlands can be found in the central areas of South America.
58. Uruguay doesn't have any areas with over 250 people per square mile.
59. Ethanol is partially made from wheat.
60. Brazilian oil reserves are mainly found on Brazil's eastern coast.

# Yearly Faire Attendance by Weekend and Advertising Budget



## Yearly Faire Attendance by Weekend and Advertising Budget

61. Which year had the highest overall attendance?
- 2019
  - 2020
  - 2021
  - 2022
62. In which year was the advertising budget highest?
- 2020
  - 2021
  - 2022
  - 2023
63. Which weekend had the least attendance in 2023?
- 1st Weekend
  - 2nd Weekend
  - 3rd Weekend
  - 4th Weekend
64. The advertising budget is shown for how many years?
- 3
  - 4
  - 5
  - 6
65. What does the y-axis on the left represent?
- Number of weekends
  - Attendance
  - Advertising budget
  - Years
66. What single weekend had the most attendees?
- 1st Weekend 2020
  - 3rd Weekend 2021
  - 4th Weekend 2019
  - 5th Weekend 2023

67. In 2023, the attendance for all weeks combined was
- Higher than 2019
  - Lower than 2019
  - Equal to 2019
  - Not shown
68. Which weekend typically had the highest attendance across all years?
- 1st Weekend
  - 2nd Weekend
  - 3rd Weekend
  - 4th Weekend
69. In which year did the 1st weekend have the highest attendance?
- 2019
  - 2020
  - 2021
  - 2022
70. How many times did the 3rd weekend have the highest attendance across all years?
- 0
  - 1
  - 2
  - 3

### TRUE/FALSE

71. The yearly advertising budget is represented by a line.
72. The year with the highest advertising budget had the highest attendance.
73. In 2022, the 1st weekend had the lowest attendance of all weekends that year.
74. First weekend attendance rose every year from 2019 to 2021.
75. The budget for advertising increased every year.



**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ MAPS/GRAPHS/CHARTS  
SPRING DISTRICT TEST – GRADES 7 & 8**

**Answer Key**

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

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

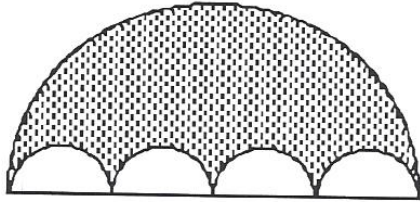


# Mathematics

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

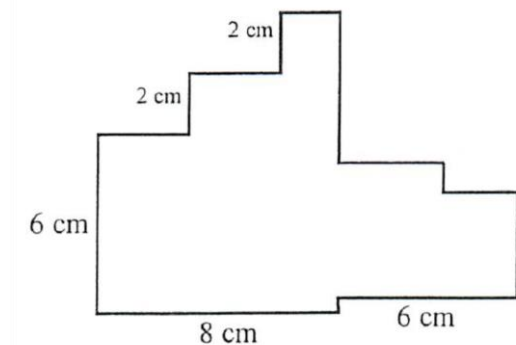
# 2024 – 2025 University Interscholastic League JH/MS Mathematics Contest A

- (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)  $2\pi$                       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)  $4\pi$  sq. cm.                      D)  $16\pi$  sq. cm.  
 B)  $6\pi$  sq. cm.                      E)  $64\pi$  sq. cm.  
 C)  $12\pi$  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

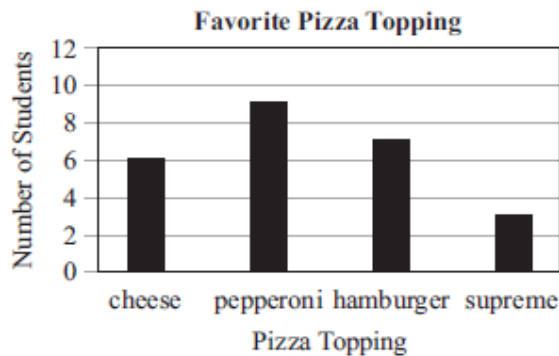
- (23) When each side of a square increased in length by 50%, its area increased by 180 square inches. How many square inches are in the original square?  
 A) 80                      B) 90                      C) 100                      D) 144                      E) 270

- (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%



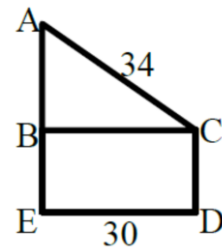
Problem # 25

- (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  $30 \text{ cm}^2$  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 8<sup>th</sup> grade English  
C) Every 15<sup>th</sup> student who enters school one morning  
D) Every 10<sup>th</sup> 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

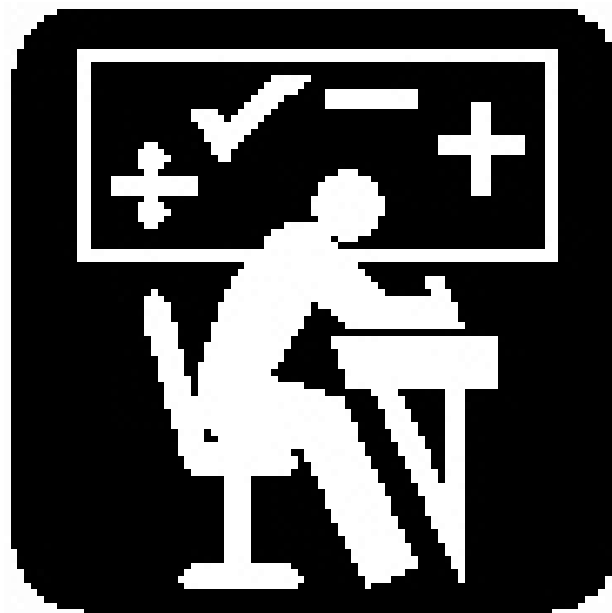
- (26) E
- (27) C
- (28) E
- (29) A
- (30) D
- (31) C
- (32) E (28)
- (33) D
- (34) E
- (35) D
- (36) C
- (37) A
- (38) D
- (39) B
- (40) A
- (41) C
- (42) D
- (43) E
- (44) A
- (45) B
- (46) C
- (47) E
- (48) A
- (49) D
- (50) C

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



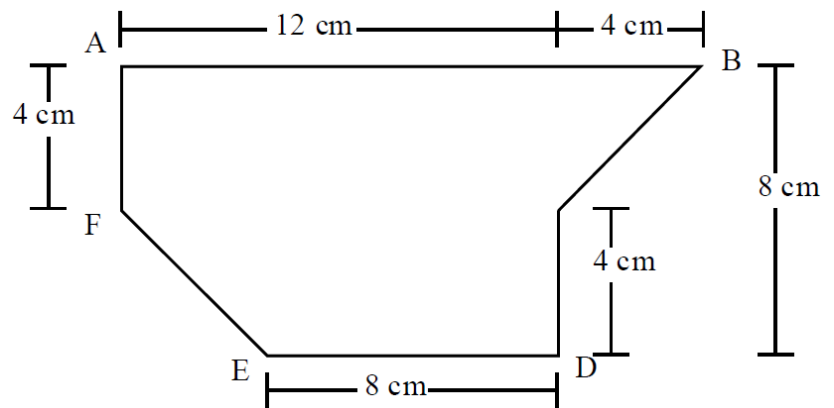
# Mathematics

**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

- (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)  $\pi$  meters

D)  $2\pi$  meters

E)  $4\pi$  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

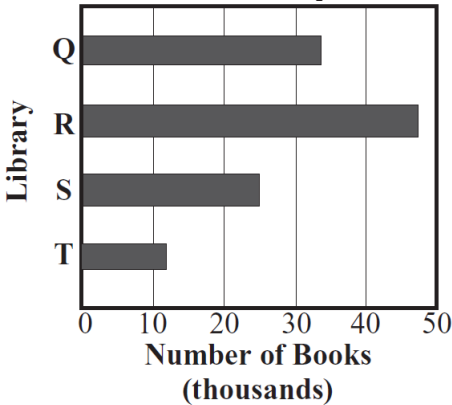
- (23) Mr. Gonzales was 125 miles from home at 8:30 A.M. He arrived home at 11:00 A.M. What was his average speed for the time-period from 8:30 A.M. to 11:00 A.M.?
- A) 32 miles/hour    B) 38 miles/hour    C) 42 miles/hour    D) 50 miles/hour    E) 55 miles/hour

- (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

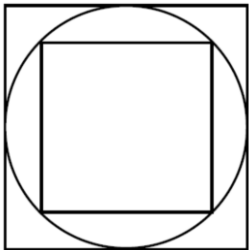


Problem # 25

- (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 1002<sup>nd</sup> 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.

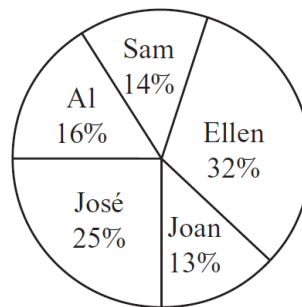
**88, 91, 89, 85, 92**

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.

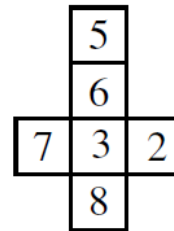
**Votes Received**



**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



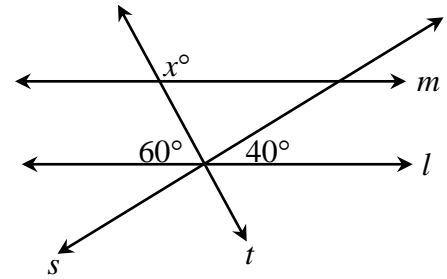
Problem # 43

- (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)  $60^\circ$   
B)  $70^\circ$   
C)  $80^\circ$   
D)  $120^\circ$   
E)  $140^\circ$



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



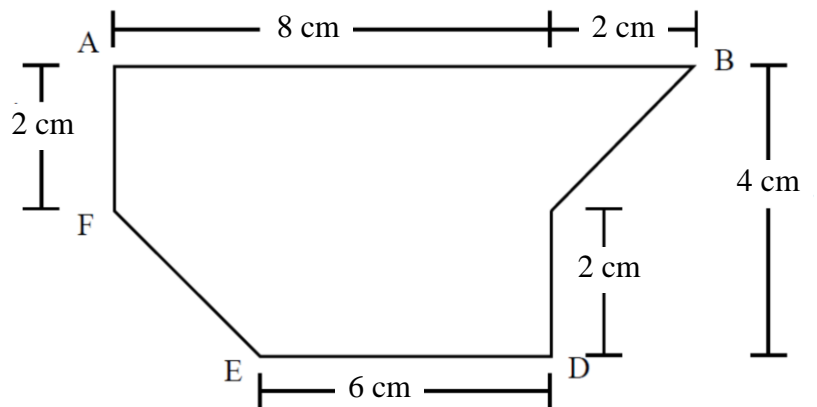
# Mathematics

**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)  $\pi$  meters

D)  $2\pi$  meters

E)  $4\pi$  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

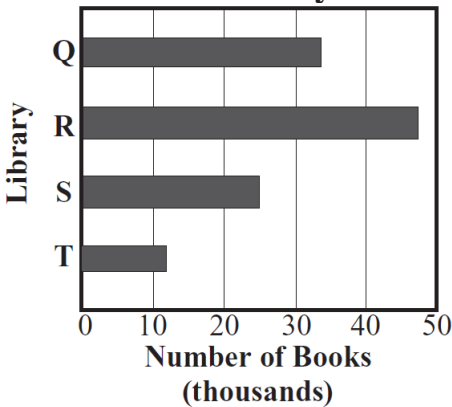
- (24) What number should go in the empty box to make the equation true?

$$\frac{44 \times 7}{35 - \square} = 77$$

- 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

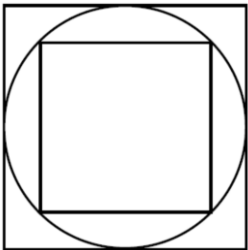


Problem # 25

- (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

Problem #28



- A) 10  
B) 20  
C) 25  
D) 50  
E) 120

- (29) If the pattern shown below continues, what will be the 100<sup>th</sup> 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.

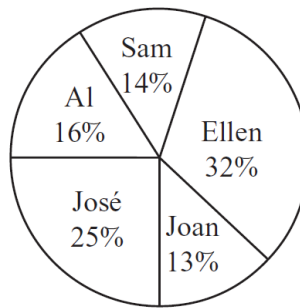
**78, 81, 79, 75, 82**

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**

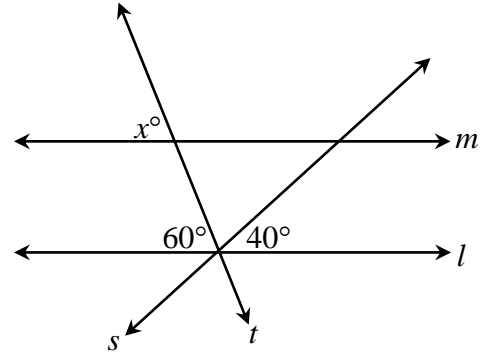
- (34) Which 2 candidates combined received the total votes closest to the leader's total?  
 A) Al and Sam                      B) Ellen and José                      C) Sam and Ellen                      D) Ellen and Joan                      E) Al and José
- (35) If 200 total student votes were counted, 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)  $60^\circ$   
B)  $70^\circ$   
C)  $80^\circ$   
D)  $120^\circ$   
E)  $140^\circ$



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 Junior High Number Sense Test A**

Contestant's Number \_\_\_\_\_

Final		
2 <sup>nd</sup>		
1 <sup>st</sup>		
	<b>Score</b>	<b>Initials</b>

**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) <math>2025 \div 25 =</math> _____</p> <p>(2) <math>25 \times 16 =</math> _____</p> <p>(3) <math>103 - 59 =</math> _____</p> <p>(4) <math>1101 \div 3 =</math> _____</p> <p>(5) <math>\frac{7}{12} - \frac{1}{4} =</math> _____</p> <p>(6) <math>24 \div 0.25 =</math> _____</p> <p>(7) <math>38 \times 11 =</math> _____</p> <p>(8) <math>17^2 =</math> _____</p> <p>(9) <math>24 - 16 \div 4 + 2 =</math> _____</p> <p>*(10) <math>2024 \times 99 + 2025 =</math> _____</p> <p>(11) <math>19 \times 21 =</math> _____</p> <p>(12) The median of 18, 20, 15, 12 is _____</p> <p>(13) Which is smaller: <math>\frac{9}{11}</math> or <math>\frac{11}{13}</math>? _____</p> <p>(14) <math>21 \times 18 + 9 \times 18 =</math> _____</p> <p>(15) <math>38 \times 78 =</math> _____</p> <p>(16) <math>220 - 31 - 29 =</math> _____</p> <p>(17) <math>27^2 =</math> _____</p> <p>(18) <math>17 + 20 + 23 + 26 + 29 =</math> _____</p> <p>(19) MDXL = _____ (Arabic Numeral)</p> | <p>*(20) <math>361 \times 330 =</math> _____</p> <p>(21) If <math>2x + 13 = 21</math>, then <math>x^2 =</math> _____</p> <p>(22) <math>102 \times 104 =</math> _____</p> <p>(23) <math>9\frac{5}{12} - 6\frac{2}{3} =</math> _____</p> <p>(24) A <math>12\frac{1}{2}\%</math> sales tax on \$16 is \$ _____</p> <p>(25) <math>3\frac{2}{3} \times 3\frac{1}{3} =</math> _____ (mixed number)</p> <p>(26) <math>2.5 \times 4.4 \times 10 =</math> _____</p> <p>(27) 1 gallon = _____ cubic inches</p> <p>(28) The GCD of 18, 12 and 20 is _____</p> <p>(29) How many whole numbers evenly divide 24? _____</p> <p>*(30) <math>545 \times 121 - 45 =</math> _____</p> <p>(31) <math>37 \times 73 =</math> _____</p> <p>(32) If a square, with area 36, and equilateral triangle have the same perimeter, the triangle side = _____</p> <p>(33) If <math>1.75 - 0.5 = n</math>, the <math>n^{-1} =</math> _____</p> <p>(34) <math>-5^2 =</math> _____</p> <p>(35) 3 cups = _____ ounces</p> <p>(36) 1 inch = _____ centimeters</p> <p>(37) <math>41\frac{2}{3}\%</math> of 36 is _____</p> |
|---|---|

- (38)  $111 \times 678 =$  \_\_\_\_\_
- (39) The area of a square with a diagonal of 8 is \_\_\_\_\_
- \*(40) 410 yards = \_\_\_\_\_ inches
- (41) For the sequence: 3, **n**, 11, **q**, 19, 23, . . . **n + q** equals \_\_\_\_\_
- (42)  $5^4 + 5^3 =$  \_\_\_\_\_
- (43)  $75 \times 23 =$  \_\_\_\_\_
- (44) The number of elements in  $\{1, 2, 3, 5\} \cup \{2, 4, 6, 8\}$  is \_\_\_\_\_
- (45)  $4 \text{ (base 5)} \times 41 \text{ (base 5)} =$  \_\_\_\_\_ (base 5)
- (46) The length of the edge of a cube with surface area 150 is \_\_\_\_\_
- (47) The perimeter of a right triangle with leg 5 and hypotenuse 13 is \_\_\_\_\_
- (48) The largest prime number less than 100 is \_\_\_\_\_
- (49) The volume of a rectangular solid that measures 8 by 5 by  $x$  is 120. What is  $x$ ? \_\_\_\_\_
- \*(50)  $39782 \div 25 =$  \_\_\_\_\_
- (51) What is the area of the trapezoid with bases  $7\frac{1}{2}$ ,  $9\frac{1}{2}$  and height 8? \_\_\_\_\_
- (52) What is the 10<sup>th</sup> term in the sequence: 1, 3, 5, . . . ? \_\_\_\_\_
- (53)  $101 \times 468 =$  \_\_\_\_\_
- (54) Twice a number added to 12 is 14. The number is \_\_\_\_\_
- (55) What is the perimeter of a rectangle with diagonal 13 and length 12? \_\_\_\_\_
- (56) The area of a rhombus with diagonals 12 and  $x$  is 60. What is  $x$ ? \_\_\_\_\_
- (57)  $48 \times 24 =$  \_\_\_\_\_
- (58)  $(12^2 + 8 \times 6) \div 5$  has a remainder of \_\_\_\_\_
- (59) If  $13 - 2x < 27$ , then  $x >$  \_\_\_\_\_
- \*(60)  $35^3 =$  \_\_\_\_\_
- (61)  $(-12) - (-24) \div (-3) =$  \_\_\_\_\_
- (62)  $25\frac{1}{3}$  days = \_\_\_\_\_ hours
- (63) 20 meters/sec = \_\_\_\_\_ km/hr
- (64)  $0.4666\ldots =$  \_\_\_\_\_ (common fraction)
- (65)  $\frac{3}{4} + \frac{4}{3} =$  \_\_\_\_\_
- (66) The volume of a circular cylinder with radius 10 and length 25 is  $k\pi$ . What is  $k$ ? = \_\_\_\_\_
- (67) The sum of the whole number divisors of 12 is \_\_\_\_\_
- (68)  $3! \times 4! =$  \_\_\_\_\_
- (69) 225% of 444 = \_\_\_\_\_
- \*(70) 15 square miles = \_\_\_\_\_ acres
- (71)  $286 \times 49 =$  \_\_\_\_\_
- (72)  $43\frac{3}{4}\%$  = \_\_\_\_\_ (common fraction)
- (73)  $22 \times 0.8181\ldots =$  \_\_\_\_\_
- (74) The surface area of a sphere with a diameter of 8 is  $k\pi$  and  $k =$  \_\_\_\_\_
- (75) What is the probability of drawing a red queen from a standard deck of 52 cards? \_\_\_\_\_
- (76) If the shortest distance between the points (6, 5) and (0, **x**) is 10, what is **x**? \_\_\_\_\_
- (77)  $5^3 \div 25 =$  \_\_\_\_\_
- (78) 18% of **n** equals 9% of 20. **n** = \_\_\_\_\_
- (79)  $20 + 19 + 18 + \ldots + 0 =$  \_\_\_\_\_
- \*(80)  $749 \times 359 =$  \_\_\_\_\_

# 2024 – 2025 University Interscholastic League Junior High Number Sense Test A – Key

(1) 81	*(20) 113174 – 125086	(38) 75258	(59) -7
(2) 400	(21) 16	(39) 32	*(60) 40732 – 45018
(3) 44	(22) 10608	*(40) 14022 – 15498	(61) -20
(4) 367	(23) $2\frac{3}{4}$ ; 2.75; $\frac{11}{4}$	(41) 22	(62) 608
(5) $\frac{1}{3}$	(24) 2.00	(42) 750	(63) 72
(6) 96	(25) $12\frac{2}{9}$	(43) 1725	(64) $\frac{7}{15}$
(7) 418	(26) 110	(44) 7	(65) $2\frac{1}{12}$ ; $\frac{25}{12}$
(8) 289	(27) 231	(45) 314	(66) 2500
(9) 22	(28) 2	(46) 5	(67) 28
*(10) 192281 – 212521	(29) 8	(47) 30	(68) 144
(11) 399	*(30) 62605 – 69195	(48) 97	(69) 999
(12) $16.5$ ; $16\frac{1}{2}$ ; $\frac{33}{2}$	(31) 2701	*(50) 1512 – 1670	*(70) 9120 – 10080
(13) $\frac{9}{11}$	(32) 8	(51) 68	(71) 14014
(14) 540	(33) $\frac{4}{5}$ ; .8	(52) 19	(72) $\frac{7}{16}$
(15) 2964	(34) -25	(53) 47268	(73) 18
(16) 160	(35) 24	(54) 1	(74) 64
(17) 729	(36) $2.54$ ; $2\frac{27}{50}$ ; $\frac{127}{50}$	(55) 34	(75) $\frac{1}{26}$
(18) 115	(37) 15	(56) 10	(76) -3
(19) 1540		(57) 1152	(77) 5
		(58) 2	(78) 10
			(79) 210
			*(80) 255447 – 282335

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 Junior High Number Sense Test B**

Contestant's Number \_\_\_\_\_

Final		
2 <sup>nd</sup>		
1 <sup>st</sup>		
	<b>Score</b>	<b>Initials</b>

**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) <math>50 \div 0.25 =</math> _____</p> <p>(2) <math>25 \times 0.12 =</math> _____</p> <p>(3) <math>411 - 109 =</math> _____</p> <p>(4) <math>981 \div 9 =</math> _____</p> <p>(5) <math>\frac{11}{16} - \frac{1}{2} =</math> _____</p> <p>(6) <math>2.25 - 0.25 =</math> _____</p> <p>(7) <math>12 \times 14 =</math> _____</p> <p>(8) <math>23^2 =</math> _____</p> <p>(9) <math>12 + 8 \div 2 - 4 =</math> _____</p> <p>*(10) <math>2025 \times 101 - 2024 =</math> _____</p> <p>(11) <math>73 \times 77 =</math> _____</p> <p>(12) The median of 11, 6, 20, 16 is _____</p> <p>(13) <math>132 \times \frac{9}{11} =</math> _____</p> <p>(14) <math>26 \times 11 - 26 \times 6 =</math> _____</p> <p>(15) <math>13 \times 10 \times 13 =</math> _____</p> <p>(16) <math>461 + 28 + 32 =</math> _____</p> <p>(17) <math>56^2 =</math> _____</p> <p>(18) <math>31 + 25 + 19 + 13 + 7 =</math> _____</p> <p>(19) MMXXIV = _____ (Arabic Numeral)</p> | <p>*(20) <math>454 \times 219 - 26 =</math> _____</p> <p>(21) <math>95 \times 98 =</math> _____</p> <p>(22) If <math>3x - 13 = 26</math>, then <math>x^2 =</math> _____</p> <p>(23) <math>8\frac{3}{4} + 6\frac{11}{12} =</math> _____</p> <p>(24) An <math>8\frac{1}{3}\%</math> sales tax on \$48 is \$ _____</p> <p>(25) <math>4\frac{1}{2} \times 2\frac{1}{2} =</math> _____ (mixed number)</p> <p>(26) <math>1.25 \times 2.4 \times 10 =</math> _____</p> <p>(27) 4 gallons = _____ cubic inches</p> <p>(28) The GCD of 12, 24 and 16 is _____</p> <p>(29) How many whole numbers evenly divide 54? _____</p> <p>*(30) <math>109 \times 636 - 24 =</math> _____</p> <p>(31) <math>27 \times 87 =</math> _____</p> <p>(32) If a square, with area 9, and equilateral triangle have the same perimeter, the triangle side = _____</p> <p>(33) If <math>2.5 - 0.25 = n</math>, the <math>n^{-1} =</math> _____</p> <p>(34) <math>-9^2 =</math> _____</p> <p>(35) 3 pints = _____ ounces</p> <p>(36) 3 inches = _____ centimeters</p> <p>(37) <math>58\frac{1}{3}\%</math> of 24 is _____</p> |
|---|---|

- (38)  $494 \times 111 =$  \_\_\_\_\_
- (39) The area of a square with a diagonal of 12 is \_\_\_\_\_
- \*(40) 3 miles = \_\_\_\_\_ feet
- (41) For the sequence: 2, **n**, 10, **q**, 26, 37, . . . **q - n** equals \_\_\_\_\_
- (42)  $4^4 - 4^3 =$  \_\_\_\_\_
- (43)  $31 \times 75 =$  \_\_\_\_\_
- (44) The number of elements in  $\{2, 3, 5, 6\} \cap \{1, 2, 3, 4\}$  is \_\_\_\_\_
- (45)  $3 \text{ (base 4)} \times 32 \text{ (base 4)} =$  \_\_\_\_\_ (base 4)
- (46) The length of the edge of a cube with surface area 54 is \_\_\_\_\_
- (47) The perimeter of a right triangle with leg 9 and hypotenuse 15 is \_\_\_\_\_
- (48) The smallest prime number larger than 50 is \_\_\_\_\_
- (49) The volume of a rectangular solid that measures 6 by 8 by  $x$  is 96. What is  $x$ ? \_\_\_\_\_
- \*(50)  $66275 \div 25 =$  \_\_\_\_\_
- (51) What is the area of the trapezoid with bases  $9\frac{2}{3}$ ,  $7\frac{2}{3}$  and height 6? \_\_\_\_\_
- (52) What is the 8<sup>th</sup> term in the sequence: 1, 2, 3, . . . ? \_\_\_\_\_
- (53)  $101 \times 935 =$  \_\_\_\_\_
- (54) Three times a number added to 5 is 38. The number is \_\_\_\_\_
- (55) What is the perimeter of a rectangle with diagonal 15 and length 12? \_\_\_\_\_
- (56) The area of a rhombus with diagonals 14 and  $x$  is 105. What is  $x$ ? \_\_\_\_\_
- (57)  $125 \times 24 =$  \_\_\_\_\_
- (58)  $(7^3 + 7 \times 6) \div 4$  has a remainder of \_\_\_\_\_
- (59) If  $15 - 2x > 43$ , then  $x <$  \_\_\_\_\_
- \*(60)  $8311 \div 79 \times 101 =$  \_\_\_\_\_
- (61)  $24 + (-24) \div 8 =$  \_\_\_\_\_
- (62)  $24\frac{3}{7}$  weeks = \_\_\_\_\_ days
- (63) 15 meters/sec = \_\_\_\_\_ km/hr
- (64)  $0.7333\ldots =$  \_\_\_\_\_ (common fraction)
- (65)  $\frac{3}{5} + \frac{5}{3} =$  \_\_\_\_\_
- (66) The volume of a circular cylinder with radius 8 and length 20 is  $k\pi$ . What is  $k$ ? = \_\_\_\_\_
- (67) The sum of the whole number divisors of 20 is \_\_\_\_\_
- (68)  $\frac{5!+3!}{3!} =$  \_\_\_\_\_
- (69) 275% of 240 = \_\_\_\_\_
- \*(70) 2 square yards = \_\_\_\_\_ inches
- (71)  $286 \times 56 =$  \_\_\_\_\_
- (72)  $58\frac{1}{3}\%$  = \_\_\_\_\_ (common fraction)
- (73)  $30 \times 0.7333 \ldots =$  \_\_\_\_\_
- (74) The surface area of a sphere with a diameter of 6 is  $k\pi$  and  $k =$  \_\_\_\_\_
- (75) What is the probability of drawing an ace from a standard deck of 52 cards? \_\_\_\_\_
- (76) If the shortest distance between the points (6, 5) and (12, **x**) is 10, what is **x**? \_\_\_\_\_
- (77)  $4^4 \div 16 =$  \_\_\_\_\_
- (78) 14% of **n** equals 9% of 28. **n** = \_\_\_\_\_
- (79)  $21 + 19 + 17 + \ldots + 1 =$  \_\_\_\_\_
- \*(80)  $6875 \times 321 =$  \_\_\_\_\_

## 2024 – 2025 University Interscholastic League Junior High Number Sense Test B – Key

(1) 200	*(20) 94430 – 104370	(38) 54834	(59) -14
(2) 3	(21) 9310	(39) 72	*(60) 10095 – 11156
(3) 302	(22) 169	*(40) 15048 – 16632	(61) 21
(4) 109	(23) $15\frac{2}{3}; \frac{47}{3}$	(41) 12	(62) 171
(5) $\frac{3}{16}; .1875$	(24) 4.00	(42) 192	(63) 54
(6) 2	(25) $11\frac{1}{4}$	(43) 2325	(64) $\frac{11}{15}$
(7) 168	(26) 30	(44) 2	(65) $2\frac{4}{15}; \frac{34}{15}$
(8) 529	(27) 924	(45) 222	(66) 1280
(9) 12	(28) 4	(46) 3	(67) 42
*(10) 192376 – 212626	(29) 8	(47) 36	(68) 21
(11) 5621	*(30) 65835 – 72765	(48) 53	(69) 660
(12) $13.5; 13\frac{1}{2}; \frac{27}{2}$	(31) 2349	*(50) 2519 – 2783	*(70) 2463 – 2721
(13) 108	(32) 4	(51) 52	(71) 16016
(14) 130	(33) $\frac{4}{9}$	(52) 8	(72) $\frac{7}{12}$
(15) 1690	(34) -81	(53) 94435	(73) 22
(16) 521	(35) 48	(54) 11	(74) 36
(17) 3136	(36) $7.62; 7\frac{31}{50}; \frac{381}{50}$	(55) 42	(75) $\frac{1}{13}$
(18) 95	(37) 14	(56) 15	(76) 13
(19) 2024		(57) 3000	(77) 16
		(58) 1	(78) 18
			(79) 121
			*(80) 2096532 – 2317218

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 Junior High Number Sense Test C**

Contestant's Number \_\_\_\_\_

Final		
2 <sup>nd</sup>		
1 <sup>st</sup>		
	<b>Score</b>	<b>Initials</b>

**Read Directions Carefully  
Before Beginning Test**

**Do Not Unfold This Sheet  
Until Told to Begin**

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The person conducting this contest should explain these directions to the contestants.

**Stop – Wait for Signal!**

- |   |   |
|---|---|
| <p>(1) <math>40 \div 0.25 =</math> _____</p> <p>(2) <math>25 \times 0.24 =</math> _____</p> <p>(3) <math>717 - 408 =</math> _____</p> <p>(4) <math>639 \div 9 =</math> _____</p> <p>(5) <math>\frac{3}{4} - \frac{7}{12} =</math> _____</p> <p>(6) <math>5.75 - 0.75 =</math> _____</p> <p>(7) <math>12 \times 16 =</math> _____</p> <p>(8) <math>25^2 =</math> _____</p> <p>(9) <math>16 + 18 \div 3 - 6 =</math> _____</p> <p>*(10) <math>2025 \times 99 + 2024 =</math> _____</p> <p>(11) <math>43 \times 47 =</math> _____</p> <p>(12) The median of 10, 7, 24, 13 is _____</p> <p>(13) <math>105 \times \frac{7}{15} =</math> _____</p> <p>(14) <math>44 \times 23 - 44 \times 18 =</math> _____</p> <p>(15) <math>15 \times 10 \times 15 =</math> _____</p> <p>(16) <math>318 + 58 + 42 =</math> _____</p> <p>(17) <math>71^2 =</math> _____</p> <p>(18) <math>34 + 28 + 22 + 16 + 10 =</math> _____</p> <p>(19) MMXXV = _____ (Arabic Numeral)</p> | <p>*(20) <math>454 \times 329 + 34 =</math> _____</p> <p>(21) <math>99 \times 96 =</math> _____</p> <p>(22) If <math>5x - 13 = 32</math>, then <math>x^2 =</math> _____</p> <p>(23) <math>5\frac{7}{12} + 6\frac{3}{4} =</math> _____</p> <p>(24) An <math>8\frac{1}{3}\%</math> sales tax on \$60 is \$ _____</p> <p>(25) <math>8\frac{1}{2} \times 2\frac{1}{2} =</math> _____ (mixed number)</p> <p>(26) <math>1.25 \times 1.6 \times 10 =</math> _____</p> <p>(27) 3 gallons = _____ cubic inches</p> <p>(28) The GCD of 12, 36 and 24 is _____</p> <p>(29) How many whole numbers evenly divide 44? _____</p> <p>*(30) <math>221 \times 636 + 44 =</math> _____</p> <p>(31) <math>68 \times 48 =</math> _____</p> <p>(32) If a square, with area 81, and equilateral triangle have the same perimeter, the triangle side = _____</p> <p>(33) If <math>1.75 - 0.25 = n</math>, the <math>n^{-1} =</math> _____</p> <p>(34) <math>-13^2 =</math> _____</p> <p>(35) 5 pints = _____ ounces</p> <p>(36) 2 inches = _____ centimeters</p> <p>(37) <math>58\frac{1}{3}\%</math> of 48 is _____</p> |
|---|---|



- (38)  $876 \times 111 =$  \_\_\_\_\_
- (39) The area of a square with a diagonal of 14 is \_\_\_\_\_
- \*(40) 5 miles = \_\_\_\_\_ feet
- (41) For the sequence: 2, **n**, 10, **q**, 26, 37, . . . **q + n** equals \_\_\_\_\_
- (42)  $3^4 - 3^3 =$  \_\_\_\_\_
- (43)  $41 \times 75 =$  \_\_\_\_\_
- (44) The number of elements in  $\{2, 3, 5, 6\} \cap \{1, 2, 3, 6\}$  is \_\_\_\_\_
- (45)  $2 \text{ (base 4)} \times 32 \text{ (base 4)} =$  \_\_\_\_\_ (base 4)
- (46) The length of the edge of a cube with surface area 600 is \_\_\_\_\_
- (47) The perimeter of a right triangle with leg 8 and hypotenuse 10 is \_\_\_\_\_
- (48) The smallest prime number larger than 80 is \_\_\_\_\_
- (49) The volume of a rectangular solid that measures 6 by 3 by  $x$  is 72. What is  $x$ ? \_\_\_\_\_
- \*(50)  $66500 \div 25 =$  \_\_\_\_\_
- (51) What is the area of the trapezoid with bases  $4\frac{2}{3}$ ,  $6\frac{2}{3}$  and height 9? \_\_\_\_\_
- (52) What is the 9<sup>th</sup> term in the sequence: 1, 2, 3, . . . ? \_\_\_\_\_
- (53)  $101 \times 857 =$  \_\_\_\_\_
- (54) Three times a number added to 15 is 36. The number is \_\_\_\_\_
- (55) What is the perimeter of a rectangle with diagonal 10 and length 8? \_\_\_\_\_
- (56) The area of a rhombus with diagonals 12 and  $x$  is 48. What is  $x$ ? \_\_\_\_\_
- (57)  $125 \times 32 =$  \_\_\_\_\_
- (58)  $(7^4 + 7 \times 9) \div 4$  has a remainder of \_\_\_\_\_
- (59) If  $28 - 2x > 44$ , then  $x <$  \_\_\_\_\_
- \*(60)  $8060 \div 79 \times 101 =$  \_\_\_\_\_
- (61)  $32 + (-32) \div 8 =$  \_\_\_\_\_
- (62)  $18\frac{4}{7}$  weeks = \_\_\_\_\_ days
- (63) 10 meters/sec = \_\_\_\_\_ km/hr
- (64)  $0.1333\ldots =$  \_\_\_\_\_ (common fraction)
- (65)  $\frac{7}{5} + \frac{5}{7} =$  \_\_\_\_\_
- (66) The volume of a circular cylinder with radius 6 and length 25 is  $k\pi$ . What is  $k$ ? = \_\_\_\_\_
- (67) The sum of the whole number divisors of 12 is \_\_\_\_\_
- (68)  $\frac{5! - 3!}{3!} =$  \_\_\_\_\_
- (69) 275% of 160 = \_\_\_\_\_
- \*(70) 5 square yards = \_\_\_\_\_ inches
- (71)  $286 \times 77 =$  \_\_\_\_\_
- (72)  $8\frac{1}{3}\%$  = \_\_\_\_\_ (common fraction)
- (73)  $45 \times 0.7333 \ldots =$  \_\_\_\_\_
- (74) The surface area of a sphere with a diameter of 12 is  $k\pi$  and  $k =$  \_\_\_\_\_
- (75) What is the probability of drawing a red ace from a standard deck of 52 cards? \_\_\_\_\_
- (76) If the shortest distance between the points (4, 3) and (0, **x**) is 5, what is **x**? \_\_\_\_\_
- (77)  $4^3 \div 16 =$  \_\_\_\_\_
- (78) 14% of **n** equals 15% of 28. **n** = \_\_\_\_\_
- (79)  $19 + 17 + 15 + \ldots + 1 =$  \_\_\_\_\_
- \*(80)  $6875 \times 479 =$  \_\_\_\_\_

## 2024 – 2025 University Interscholastic League Junior High Number Sense Test C – Key

(1) 160	*(20) 141930 – 156870	(38) 97236	(59) -8
(2) 6	(21) 9504	(39) 98	*(60) 9790 – 10819
(3) 309	(22) 81	*(40) 25080 – 27720	(61) 28
(4) 71	(23) $12\frac{1}{3}; \frac{37}{3}$	(41) 22	(62) 130
(5) $\frac{1}{6}$	(24) 5.00	(42) 54	(63) 36
(6) 5	(25) $21\frac{1}{4}$	(43) 3075	(64) $\frac{2}{15}$
(7) 192	(26) 20	(44) 3	(65) $2\frac{4}{35}; \frac{74}{35}$
(8) 625	(27) 693	(45) 130	(66) 900
(9) 16	(28) 12	(46) 10	(67) 28
*(10) 192375 – 212623	(29) 6	(47) 24	(68) 19
(11) 2021	*(30) 133570 – 147630	(48) 83	(69) 440
(12) $11.5; 11\frac{1}{2}; \frac{23}{2}$	(31) 3264	(49) 4	*(70) 6156 – 6804
(13) 49	(32) 12	*(50) 2527 – 2793	(71) 22022
(14) 220	(33) $\frac{2}{3}$	(51) 51	(72) $\frac{1}{12}$
(15) 2250	(34) -169	(52) 9	(73) 33
(16) 418	(35) 80	(53) 86557	(74) 144
(17) 5041	(36) $5.08; 5\frac{2}{25}; \frac{127}{25}$	(54) 7	(75) $\frac{1}{26}$
(18) 110	(37) 28	(55) 28	(76) 0
(19) 2025		(56) 8	(77) 4
		(57) 4000	(78) 30
		(58) 0	(79) 100
			*(80) 3128469 – 3457781

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.

### SEVENTH AND EIGHTH GRADES

**Topic:** *Overcoming a Fear*

Describe a time in your life when you overcame a fear. Write an essay about your experience giving details about what happened and the emotions you experienced.

**Topic:** *Learning a Language*

In your opinion, should students be required to learn a foreign language? Write a letter to your school principal arguing your opinion. Remember not to include your name or school name in the letter.



# 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.

### SEVENTH AND EIGHTH GRADES

**Topic:** *Core Values*

Think about your core values. Write an essay explaining two or three of them and how they impact your life.

**Topic:** *Eagerness Trouble*

Create a story about a person's eagerness leading them to trouble. You may be as creative as you would like.



# 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.

### SEVENTH AND EIGHTH GRADES

**Topic:** *Learned from Others*

Think about a lesson you have learned based on someone else's experience. Write about the experience you heard about and how you learned from it.

**Topic:** *Diminished Fear*

Rosa Parks once said, "I have learned over the years that when one's mind is made up, this diminishes fear." In an essay, explain what 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

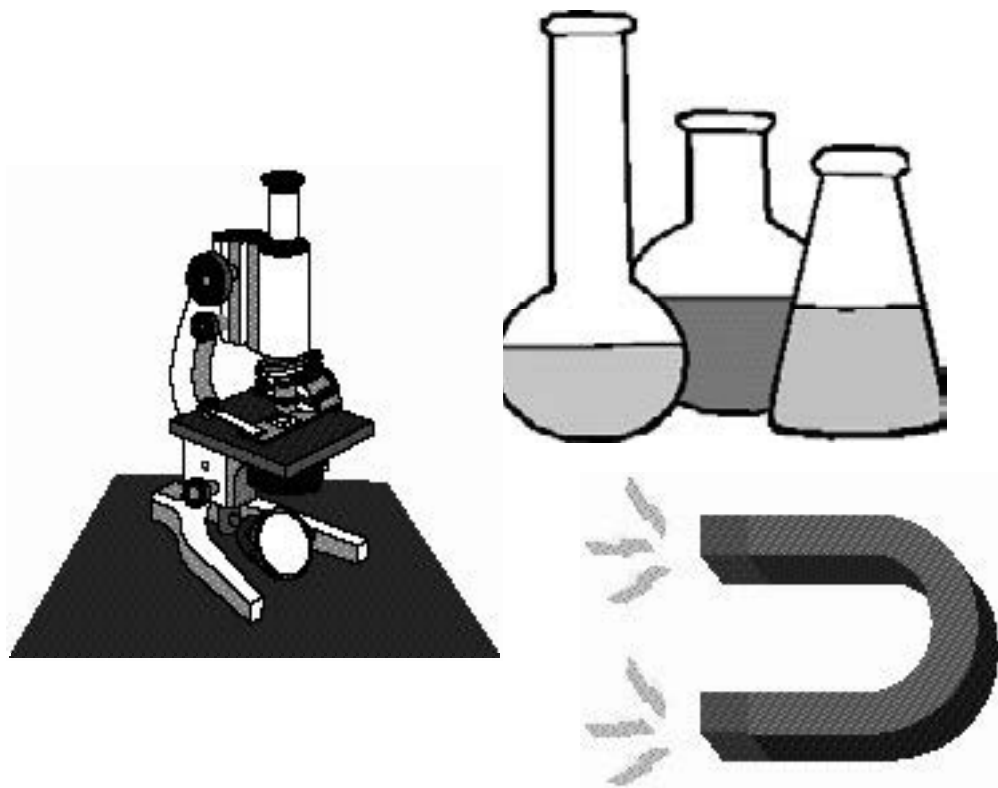
50. A    B    C    D

**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**

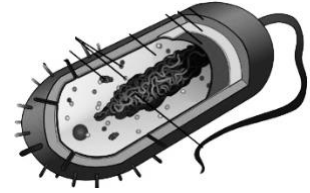
1. Which of the following is made of cells?
  - a. Rocks
  - b. Water
  - c. Sea anemone
  - d. Sun
2. Based on the table, which items indicate a chemical change occurred?

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?

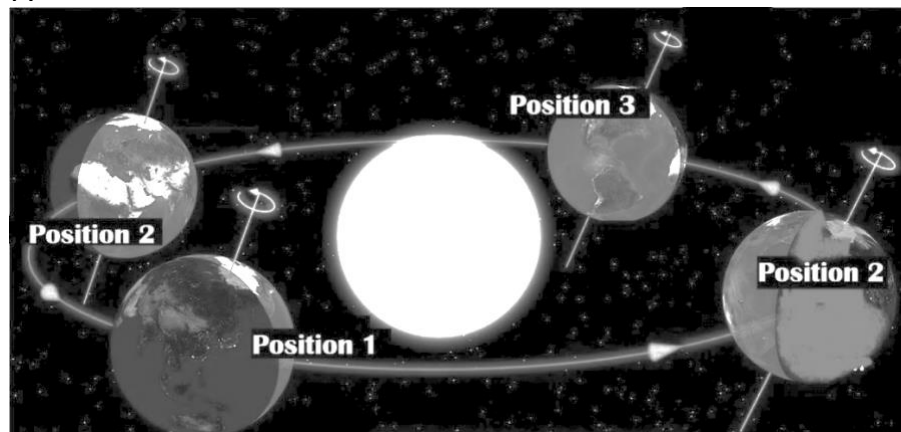
- a. Competition
- b. Mutualism
- c. Commensalism
- d. Parasitism



11. Hummingbirds have long, tubular structures used to get nectar from flowers. Which is most similar to a hummingbird's beak?

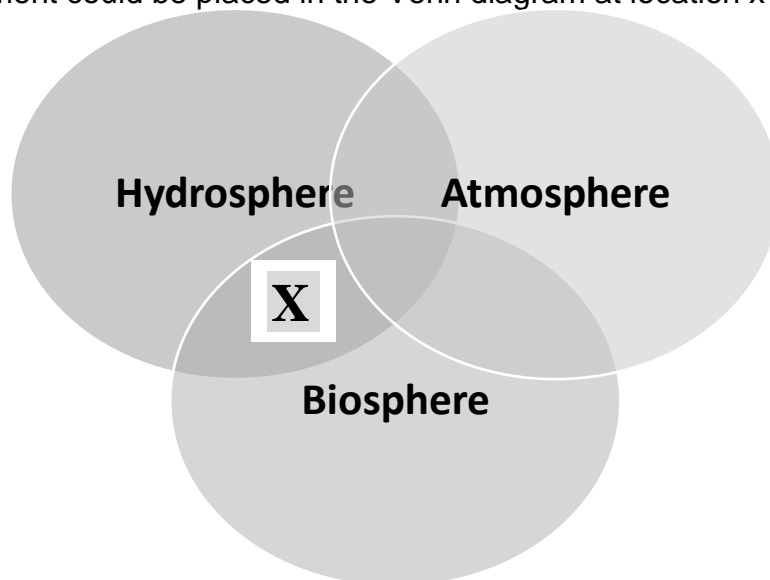
- a. Needle nose pliers
- b. Straw
- c. Forceps
- d. Bug net

12. Based on the diagram, what seasons would the southern hemisphere be at position 1?

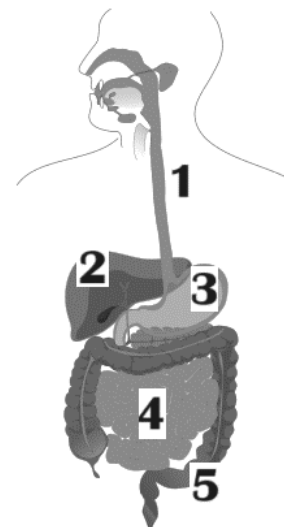


- a. Fall
- b. Winter
- c. Spring
- d. Summer

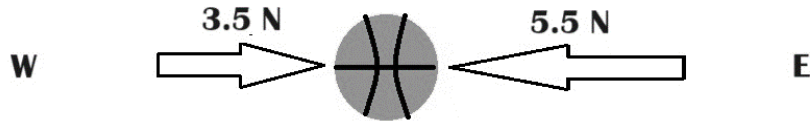
13. Which of the following statements about solar energy is FALSE?
- a. Solar energy travels in electromagnetic waves
  - b. Solar energy doesn't require a media to travel through
  - c. Solar energy is available at all times, day and night
  - d. Solar energy is considered a clean energy source
14. 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?

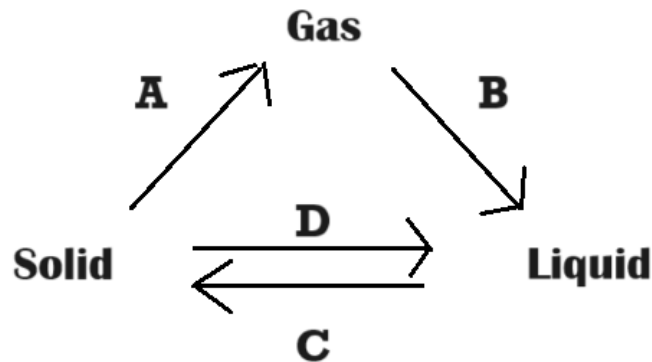
- The distance from the sun
- A solid crust
- Mountain and valley formations
- Carbon dioxide in the atmosphere
- Lunar cycle of 28 days

- 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?

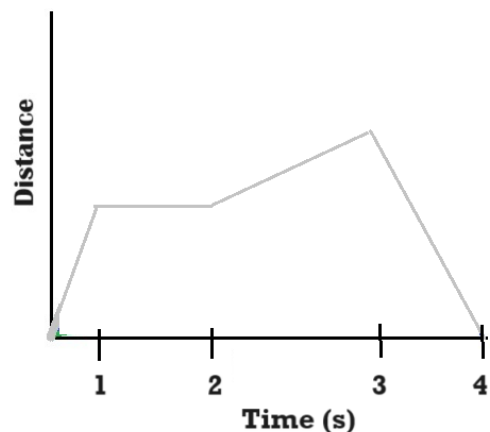
- a. A theory that describes that energy is not created or destroyed
- b. A theory that describes how the lithosphere is divided and how it moves
- c. A theory that describes the survival of the fittest
- d. A theory that describes how the climate changes

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

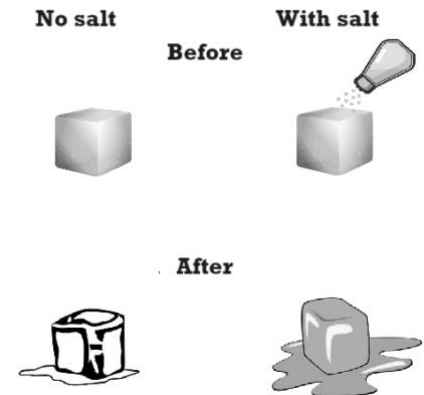


29. How are the nutrients returned back to the soil?

- 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

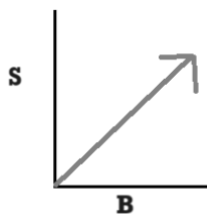
39. A clear water bottle is filled halfway with soil. Then, a thermometer is placed in the bottle and sealed. A desk lamp is turned on and placed so that it shines on the sealed container. Which would most help to demonstrate the effect of greenhouse gases on temperature?

- 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

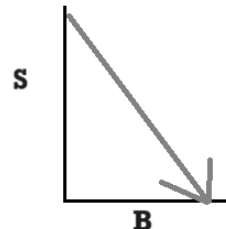
40. What is most directly responsible for the cooling effect after the eruption of a volcano?
- The sun
  - The volcanic ash
  - The jet stream
  - Precipitation
41. Which of the following would be a long-term change to the environment that could affect organisms and possibly future generations?
- A 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?

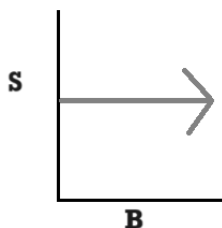
a.



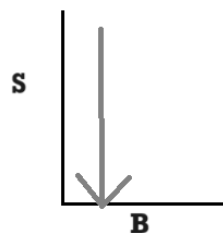
c.



b.



d.





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

A periodic table of elements is shown, with a large black arrow pointing down to the element Radium (Ra). The arrow starts at the top center and points to the element Radium (Ra) in the 7th period, 2nd group. The periodic table includes elements from Hydrogen (H) to Oganesson (Og).

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**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-2025 SCIENCE  
INVITATIONAL TEST**

*Answer Key*

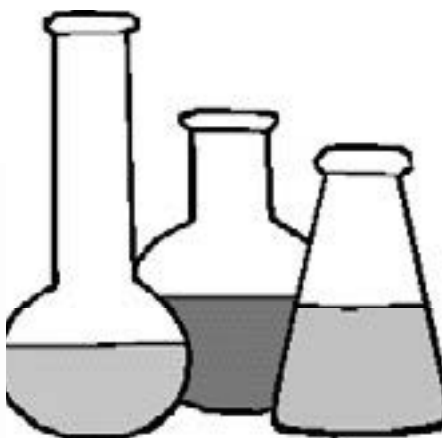
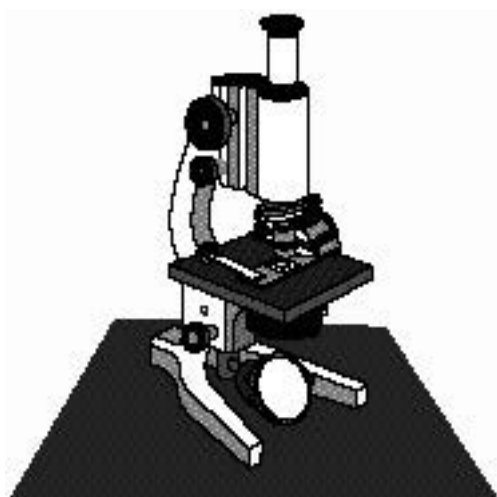
1. C	18.D	35.B
2. A	19.C	36.C
3. A	20.D	37.A
4. B	21.B	38.C
5. C	22.A	39.D
6. B	23.B	40.B
7. D	24.C	41.C
8. B	25.D	42.D
9. D	26.B	43.B
10.C	27.D	44.D
11.B	28.C	45.A
12.A	29.A	46.D
13.C	30.B	47.B
14.D	31.C	48.C
15.A	32.D	49.B
16.A	33.D	50.A
17.B	34.A	

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Science

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

- 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

The periodic table is shown with the following elements and their positions:

- Group 1:** H, Li, Na, K, Rb, Cs, Fr
- Group 2:** Be, Mg, Ca, Sr, Ba, Ra
- Group 3:** Sc, Y, La, Ac
- Group 4:** Ti, Zr, Hf, Ta
- Group 5:** V, Nb, Ta, W
- Group 6:** Cr, Mo, Ru, Rh, Ir, Pt, Au, Hg, Tl, Pb, Bi, Po, At, Rn
- Group 7:** Mn, Tc, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Po, At, Rn
- Group 8:** Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, Br, Kr
- Group 9:** Rh, Pd, Ag, Cd, In, Sn, Sb, Te, I, Xe
- Group 10:** Ni, Cu, Zn, Ga, Ge, As, Se, Br, Kr
- Group 11:** Cu, Zn, Ga, Ge, As, Se, Br, Kr
- Group 12:** Zn, Ga, Ge, As, Se, Br, Kr
- Group 13:** Al, Ga, In, Sn, Sb, Te, I, Xe
- Group 14:** C, Si, Ge, As, Se, Br, Kr
- Group 15:** N, P, As, Se, Br, Kr
- Group 16:** O, S, Se, Br, Kr
- Group 17:** F, Cl, Br, Kr
- Group 18:** He, Ne, Ar, Kr, Xe, Rn

The Lanthanide and Actinide series are shown separately at the bottom:

- Lanthanide:** La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu
- Actinide:** Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr

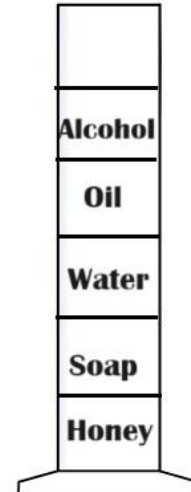
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7. Which is NOT a part of the geosphere?

- 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?

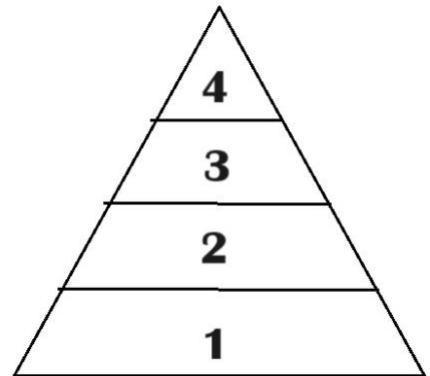
- a. Water
- b. Carbon dioxide
- c. Glucose
- d. Light

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?

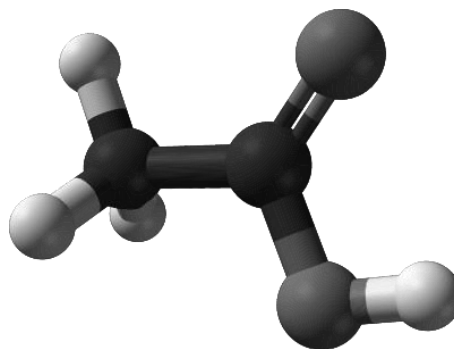
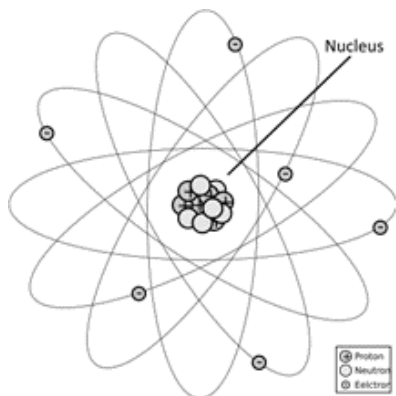
- a. Organisms at level four give indirect energy to all the consumers in the ecosystem
- b. Energy transfers directly from organisms at level two to organisms at level three
- c. Organisms at level one give direct energy to organisms in levels three and four
- d. All organisms receive 50% energy from 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.

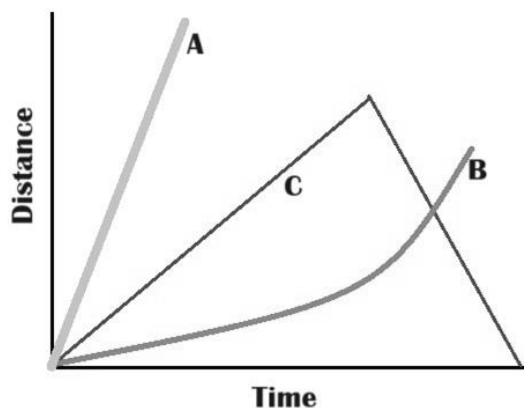


Based on this chemical formula, there are \_\_\_ more oxygen atoms than phosphorus atoms.

- 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

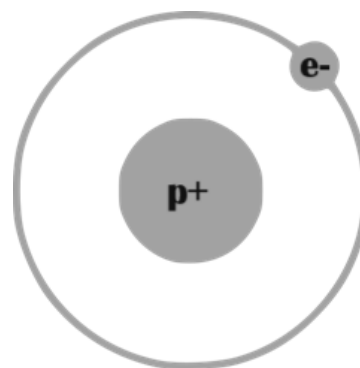


25. Three objects are tossed in the air, and the data is shown in the graph. Which correctly describes object A's path?

- 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

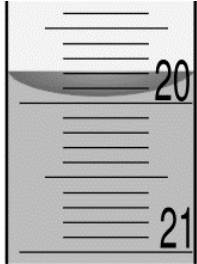
28. When mixed together, which will form a solution?

- 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 –

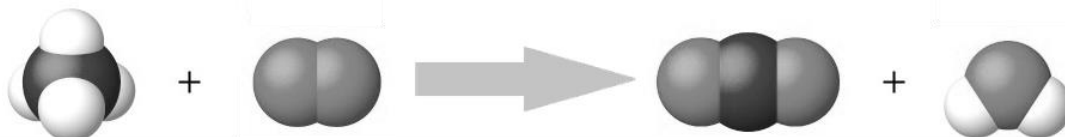
- a. Newton's laws of gravitation
- b. Newton's first law of motion
- c. Newton's second law of motion
- d. Newton's third law of motion

40. Which atomic models correctly show the law of conservation of mass?

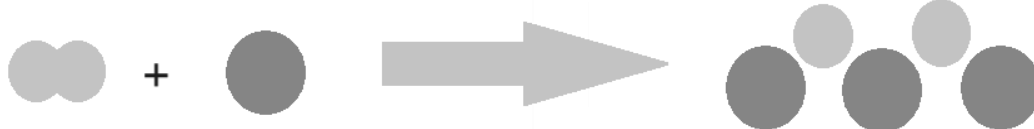
a.



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?

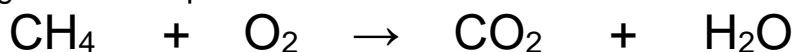
Group	Mass of Egg (kg)	Time to Stop Egg (s)
1	0.06 kg	0.01 s
2	0.06 kg	0.08 s
3	0.06 kg	0.1 s

- 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  $\text{CH}_4$  on the reactant side and 2 in front of the  $\text{H}_2\text{O}$  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  $\text{H}_2\text{O}$  on the product side.
- d. Place a coefficient of 2 in front of the  $\text{CO}_2$  on the product side and 2 in front of the  $\text{H}_2\text{O}$  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*

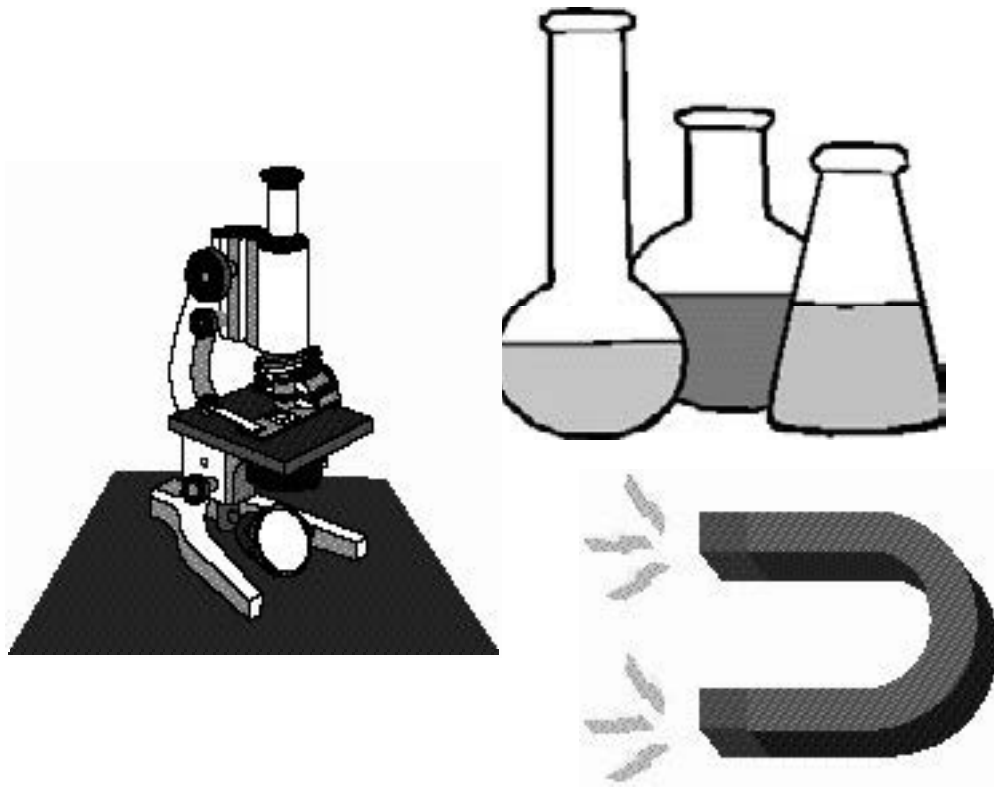
1. D	18.B	35.D
2. A	19.C	36.B
3. B	20.D	37.D
4. A	21.B	38.A
5. C	22.C	39.B
6. B	23.B	40.D
7. D	24.D	41.A
8. A	25.B	42.C
9. D	26.D	43.B
10.B	27.C	44.A
11.A	28.B	45.C
12.C	29.D	46.A
13.D	30.C	47.D
14.A	31.B	48.C
15.A	32.A	49.B
16.C	33.C	50.B
17.B	34.C	

**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Science

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

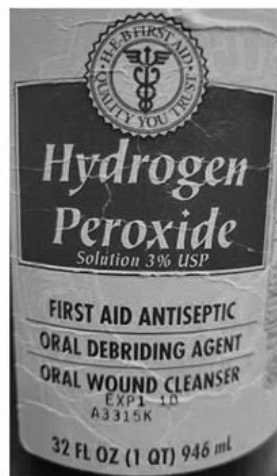
**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-2025 A+ SCIENCE  
SPRING TEST**

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*
- 1
  - 2
  - 3
  - 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?

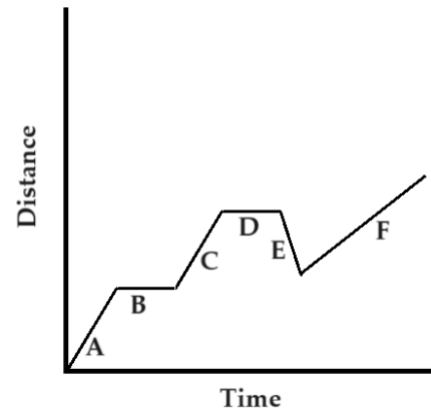
- a. 185 mph
- b. 29 mph
- c. 25 mph
- d. 53 mph

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?

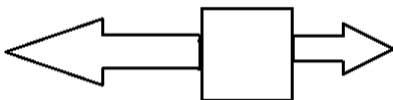
a.



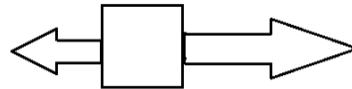
c.



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

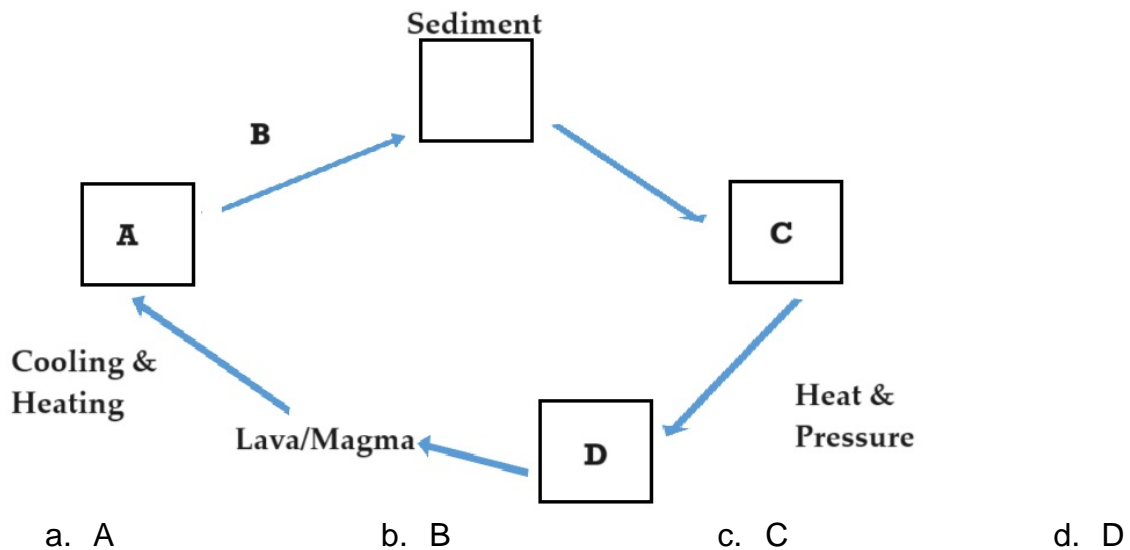
16. Outside of the solar system, a grouping of icy particles that orbits the sun is known as

- 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

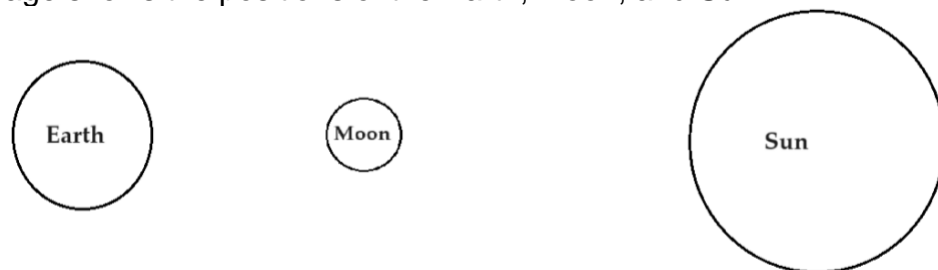
18. Which letter best represents an igneous rock?



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.



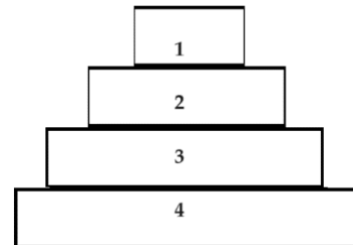
- A \_\_\_\_ tide is best represented in this image. When this occurs, there will be a \_\_\_\_ gravitational pull on the ocean tides.
- Spring; lower
  - Spring; greater
  - Neap; lower
  - Neap; greater
25. Which body system is responsible for communicating using hormones?
- Endocrine
  - Nervous
  - 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?

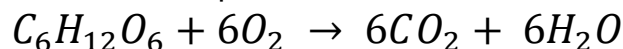
- a. 1
- b. 3
- c. 4
- d. 6

- O<sub>2</sub>
- CO<sub>2</sub>
- H<sub>2</sub>O
- Br<sub>2</sub>
- C
- NH<sub>4</sub>

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

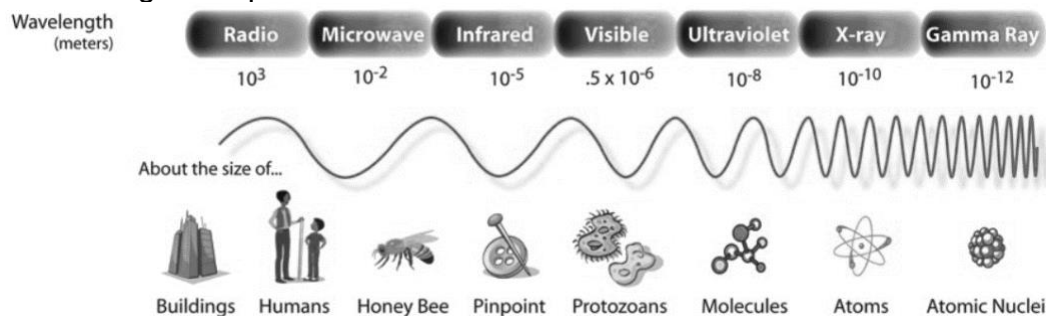
37. What atoms are present in this equation?



- 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

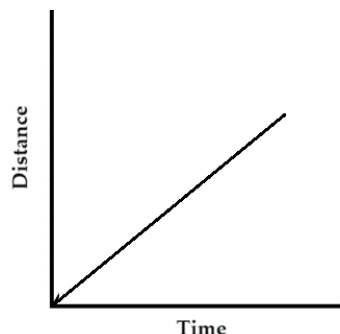
46. How would you describe the acceleration of the object based on the data provided?

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

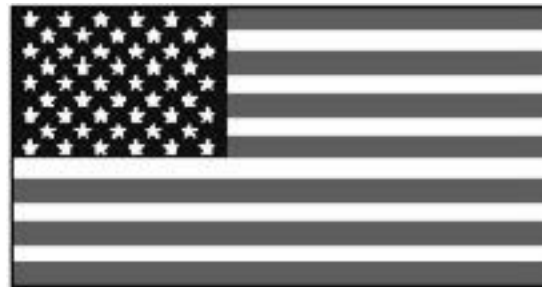
40.   A    B    C    D

**INVITATIONAL 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Social Studies

grades 7 & 8

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

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ SOCIAL STUDIES  
INVITATIONAL TEST — GRADES 7 & 8**

- Public education in Texas is primarily funded by \_\_\_\_\_ taxes.  
A. property  
B. sales  
C. income  
D. excise
- Most Puritans that came to North American colonies were looking for freedom from religious persecution in \_\_\_\_\_.  
A. New England  
B. France  
C. Spain  
D. England
- The \_\_\_\_\_ of the Gulf Coast area, in what is now Southeast Texas, used dugout canoes to fish and were written about by Cabeza de Vaca.  
A. Karankawa  
B. Comanche  
C. Apache  
D. Caddo

## Fourth Amendment

*“The rights of the people to be secure in their persons, houses, papers, and effects against \_\_\_\_\_ shall not be violated”*

- The above excerpt is best completed by which of the following?
  - double jeopardy
  - unreasonable searches and seizures
  - self-incrimination
  - cruel and unusual punishment
- Being concerned with and involved in public affairs is known as \_\_\_\_\_.
  - charity work
  - civic participation
  - public awareness
  - informed voting
- The term \_\_\_\_\_ refers to a mounted herdsman of the Spanish colonial period or the later Mexican counterpart that acted as a cowboy.
  - vaquero
  - caballo
  - ranchero
  - adobe
- The \_\_\_\_\_ region of Texas features cattle and sheep ranching and is home to Big Bend National Park.
  - Coastal Plains
  - Mountains and Basin
  - North Central Plains
  - Rio Grande Valley



8. United States Senator from Texas, \_\_\_\_\_ is shown in the picture above.
- |                |                  |
|----------------|------------------|
| A. Greg Abbott | C. Beto O'Rourke |
| B. Ted Cruz    | D. Marco Rubio   |
9. The \_\_\_\_\_ supported ratification of the U.S. Constitution by showing the need for a stronger central government.
- |                              |                                      |
|------------------------------|--------------------------------------|
| A. <i>Brutus</i> Essays      | C. Kentucky and Virginia Resolutions |
| B. Articles of Confederation | D. <i>Federalist Papers</i>          |
10. By the mid-1800s in the United States, the \_\_\_\_\_ was characterized by the plantation economy that largely produced cotton at the expense of focusing on manufacturing.
- |         |          |
|---------|----------|
| A. East | C. South |
| B. West | D. North |
11. Coronado reported to the King of Spain that he came upon a group called the Querecho that did not plant food and instead traveled around eating \_\_\_\_\_.
- |                      |                     |
|----------------------|---------------------|
| A. fruits from trees | C. fish from rivers |
| B. cows              | D. pigs             |



12. \_\_\_\_\_ were people that typically worked four to seven years in a colony in exchange for travel, food, and lodging. They were then free to work for themselves.
- |                    |                        |
|--------------------|------------------------|
| A. Enslaved people | C. Convicts            |
| B. Stock holders   | D. Indentured servants |

13. The Appalachian Mountains, navigable rivers, rich soil, and a warm climate are all physical characteristics of the \_\_\_\_\_ region of the United States.  
A. northern  
B. western  
C. southern  
D. mid-west
14. Spain's primary method of colonization in Texas was the \_\_\_\_\_ system first established in the area of El Paso.  
A. mission  
B. provincial  
C. presidio  
D. encomienda
15. The \_\_\_\_\_ region of Texas includes parts of the Guadalupe Mountains and the Permian Basin.  
A. southwest  
B. northeast  
C. southern  
D. northern
16. \_\_\_\_\_ feature limited governments largely due to their influence by the British.  
A. The United States and Canada  
B. Mexico and Argentina  
C. The Dominican Republic and Haiti  
D. Cuba and China
17. The current governor for the state of Texas is \_\_\_\_\_.  
A. Ted Cruz  
B. Dan Patrick  
C. John Cornyn  
D. Greg Abbott
18. Institutions responsible for giving people the skills, behavioral norms and customs they need to function in a society are \_\_\_\_\_.  
A. governmental institutions  
B. economic institutions  
C. religious institutions  
D. educational institutions
19. Coronado told the King of Spain in his October 1541 report that after travelling for 77 days he reached a place called \_\_\_\_\_.  
A. Quivira  
B. Teyas  
C. Querecho  
D. Cibola

*"Thereupon we had many bitter quarrels with the Christians, for they \_\_\_\_\_, and we grew so angry at it that at our departure we forgot to take along many bows, pouches and arrows, also the five emeralds, and so they were left and lost to us."*

20. In *The Journey of Alvar Nuñez Cabeza de Vaca*, his group left the company under the command of Diego de Alcaraz because they \_\_\_\_\_.  
A. "were loyal to great French ruler and sovereign"  
B. "refused to share their plentiful and bountiful food supplies"  
C. "were extremely rude and treated us as less than servants"  
D. "wanted to make slaves of our Indians"

21. According to his *Report to the King of Spain*, Coronado was ordered to explore Texas by the \_\_\_\_\_.  
 A. Governor of Texas  
 B. President of Mexico  
 C. Viceroy of New Spain  
 D. King of Spain
22. The activity of setting up and developing a business is known as \_\_\_\_\_.  
 A. entrepreneurship  
 B. profit incentive  
 C. laissez-faire  
 D. consumer choice
23. Coronado stated in his *Report to the King of Spain* that the area he was exploring was first discovered for the Spanish by \_\_\_\_\_.  
 A. Alvar de Nuñez Cabeza de Vaca  
 B. Hernando de Soto  
 C. Friar Marcos de Niza  
 D. Juan Ponce de León
24. *The Journey of Alvar Nuñez Cabeza de Vaca* states that four Natives were captured and shown \_\_\_\_\_ to see if they knew it and where it could be found.  
 A. gold  
 B. silver  
 C. beaver pelts  
 D. maize
- Limited government
  - Written code of laws and legal traditions
  - Hereditary ruler or an elected leader that is limited by the legal code
25. All of the above describe a \_\_\_\_\_.  
 A. free enterprise system  
 B. totalitarian government  
 C. republican government  
 D. constitutional government
26. *The Journey of Alvar Nuñez Cabeza de Vaca* states that Cabeza de Vaca first arrived at \_\_\_\_\_ where he stayed for 45 days.  
 A. Cape Santa Cruz  
 B. the port city of Havana  
 C. New Spain  
 D. the island of Santo Domingo
27. Some of the first \_\_\_\_\_ immigration to Texas was facilitated by the land grants awarded by Mexico to James Hewetson and James Power and then to John McMullen and James McGloin in the 1820s.  
 A. Irish  
 B. German  
 C. English  
 D. French
28. The \_\_\_\_\_ is a region in western Texas and eastern New Mexico that comes from the Spanish term for staked or palisaded plains.  
 A. Caprock Escarpment  
 B. Rio Grande  
 C. Palo Duro Canyon  
 D. Llano Estacado
29. The intellectual movement in the 17th and 18th centuries that focused on science and reason and applying those subjects to government was known as the \_\_\_\_\_.  
 A. Renaissance  
 B. Enlightenment  
 C. Reformation  
 D. Industrial Revolution

**Rights Protected by the Bill of Rights**

- Right to petition the government
- Freedom of speech
- Freedom to peaceably assemble
- Right to privacy

30. All of the above are protections included in the First Amendment **EXCEPT** for \_\_\_\_\_.  
A. right to free speech  
B. right to petition the government  
C. right to peaceably assemble  
D. right to privacy
31. The distance from the government in England to its colonies in North America allowed the colonists \_\_\_\_\_.  
A. to trade freely with other countries  
B. the ability to print money without fear of interference  
C. to make treaties with foreign powers  
D. more direct control over their governments
32. Josef Arnošt Bergmann has been described as the "father" of \_\_\_\_\_ immigration to Texas. The group mainly settled in the Central Texas counties with Fayette County being the most popular.  
A. Czech  
B. German  
C. Irish  
D. Swiss
33. The accumulation of wealth through the sale of goods and services is a main feature and driving force behind the \_\_\_\_\_ system.  
A. communist  
B. free enterprise  
C. socialist  
D. traditional
34. \_\_\_\_\_ was the first European explorer to map the coast of what is now Texas.  
A. Alonso Álvarez de Pineda  
B. Álvar Núñez Cabeza de Vaca  
C. Pánfilo de Narváez  
D. Hernando de Soto
35. The \_\_\_\_\_ marks the southern boundary between Texas and Mexico.  
A. Sabine River  
B. Red River  
C. Nueces River  
D. Rio Grande River
36. In *The Journey of Alvar Nuñez Cabeza de Vaca*, the author states that he finally ended his journey at Lisbon, Portugal in \_\_\_\_\_.  
A. 1527  
B. 1530  
C. 1533  
D. 1537
37. \_\_\_\_\_ countries are mainly limited governments with parliamentary systems.  
A. Western European  
B. East Asian  
C. Middle Eastern  
D. North African



38. The \_\_\_\_\_ in 1215 limited the power of the King and guaranteed certain rights such as due process and jury trials.
- A. English Bill of Rights
  - B. Mayflower Compact
  - C. Magna Carta
  - D. Articles of Confederation
39. The Texas Constitution of 1876 shifted control of public education systems to \_\_\_\_\_.
- A. local districts
  - B. state legislatures
  - C. the federal government
  - D. county governments
40. De Leon's colony was the only predominantly Mexican colony in Texas. It was started in 1824 and founded near the town of \_\_\_\_\_.
- A. Refugio
  - B. Castroville
  - C. Victoria
  - D. Panna Maria

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ SOCIAL STUDIES  
INVITATIONAL TEST — GRADES 7 & 8**

**Answer Key**

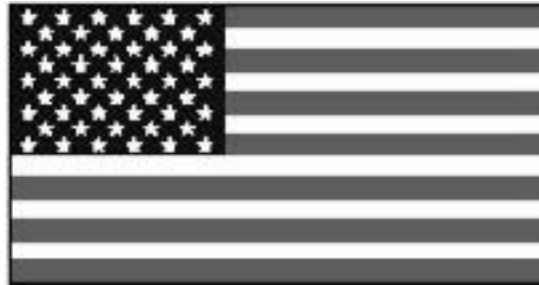
- |       |       |
|-------|-------|
| 1. A  | 21. C |
| 2. D  | 22. A |
| 3. A  | 23. C |
| 4. B  | 24. D |
| 5. B  | 25. D |
| 6. A  | 26. D |
| 7. B  | 27. A |
| 8. B  | 28. D |
| 9. D  | 29. B |
| 10. C | 30. D |
| 11. B | 31. D |
| 12. D | 32. A |
| 13. C | 33. B |
| 14. A | 34. A |
| 15. A | 35.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

**FALL/WINTER DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Social Studies

grades 7 & 8

**DO NOT OPEN TEST  
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**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ SOCIAL STUDIES  
FALL/WINTER DISTRICT TEST – GRADES 7 & 8**

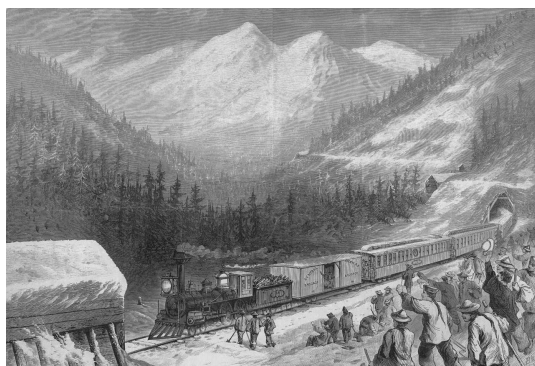
1. Based on a study of census data, \_\_\_\_\_ was determined to be the most ethnically diverse city in the United States in 2015.
- |            |                |
|------------|----------------|
| A. Houston | C. San Antonio |
| B. El Paso | D. Fort Worth  |

2. When French explorer \_\_\_\_\_ established Fort St. Louis in the region of Texas, the Spanish decided to renew their own colonization efforts.
- A. Jacques Cartier  
B. René-Robert Cavelier, Sieur de La Salle  
C. Samuel de Champlain  
D. Hernán Cortés

*“...the enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.”*

3. The \_\_\_\_\_ Amendment, quoted above, guarantees the protection of rights beyond those that are specifically listed in the Constitution.
- |        |         |
|--------|---------|
| A. 9th | C. 6th  |
| B. 3rd | D. 10th |
4. \_\_\_\_\_ serves as the current Lieutenant Governor of Texas.
- |                |                   |
|----------------|-------------------|
| A. Greg Abbott | C. George P. Bush |
| B. Dan Patrick | D. Jane Nelson    |
5. Language, ethnicity, age, and standards of living are examples of the \_\_\_\_\_ of an area.
- |                             |                                 |
|-----------------------------|---------------------------------|
| A. physical characteristics | C. human characteristics        |
| B. economic characteristics | D. governmental characteristics |
6. The \_\_\_\_\_ was a document written by settlers of the Plymouth colony in 1620 as an agreement to establish a government supported by the people.
- |                                      |                             |
|--------------------------------------|-----------------------------|
| A. Mayflower Compact                 | C. Charter of Establishment |
| B. Fundamental Orders of Connecticut | D. Social Contract          |
7. The \_\_\_\_\_ all deal with rights of the accused.
- |                                 |  |
|---------------------------------|--|
| A. Bill of Rights               | C. 13 <sup>th</sup> , 14 <sup>th</sup> , and 15 <sup>th</sup> Amendments |
| B. 4th, 5th, and 6th Amendments | D. Articles of the Constitution  |
8. A group of German immigrants helped establish \_\_\_\_\_ in 1845 and began expanding the settlement to allow for more immigration.
- |                  |                |
|------------------|----------------|
| A. New Braunfels | C. Nacogdoches |
| B. Austin        | D. Amarillo    |

9. The first group of colonists to establish a town in the San Antonio area were \_\_\_\_\_.  
A. Castilian  
B. Saharan Berbers  
C. Canary Islanders  
D. Moroccan
10. A system of government that is centralized, dictatorial, and requires its citizens to live according to strict rules is known as \_\_\_\_\_.  
A. a monarchy  
B. totalitarianism  
C. an oligarchy  
D. republicanism



11. \_\_\_\_\_ immigrants first arrived in Texas in the 1870s as part of railroad construction projects.  
A. Chinese  
B. German  
C. Irish  
D. Czech
12. In the United States, mining became a significant economic feature of the \_\_\_\_\_ in the mid-1800s and helped attract settlers and develop infrastructure.  
A. West  
B. East  
C. South  
D. North
13. Alvar Nuñez Cabeza de Vaca stated that he and around 30 men survived by \_\_\_\_\_ before two ships and the rest of their crews were lost during a storm.  
A. jumping overboard  
B. going ashore  
C. tying themselves to the mast  
D. escaping into smaller boats
14. All of the following are examples of unlimited systems of governments **EXCEPT** for \_\_\_\_\_.  
A. democracy  
B. absolute monarchy  
C. theocracy  
D. dictatorship

*"On account of this cure they made many dances and festivities, as is their custom."*

15. The above excerpt from *The Journey of Alvar Nuñez Cabeza de Vaca* refers to when Natives celebrated after Cabeza \_\_\_\_\_.  
A. brewed a medicinal potion  
B. helped break a child's fever  
C. set a fractured leg  
D. performed a surgery

16. Alvar Nuñez Cabeza de Vaca remained with the Avavare for about eight months during his Journey and acted as \_\_\_\_\_.  
A. a commander of hunting parties  
B. a healer for people from all over  
C. an advisor to the local leader  
D. an interpreter during trading festivals

17. The city of \_\_\_\_\_ takes its name from the Spanish word for yellow which most likely described the local wildflowers.  
A. Blanco  
B. Dallas  
C. Amarillo  
D. Laredo

**Cities in Texas**

- El Paso
- San Antonio
- Houston
- Laredo

18. All of the cities listed above are examples of Spanish influence on names of Texas cities **EXCEPT** for \_\_\_\_\_.  
A. El Paso  
B. San Antonio  
C. Houston  
D. Laredo

19. In Coronado's *Report to the King of Spain*, he received a \_\_\_\_\_ from a "chief Indian" in Quivira, which he sent to back to the viceroy of New Spain.  
A. set of furs  
B. piece of copper  
C. golden idol  
D. ceremonial spear

20. The \_\_\_\_\_ section of the United States has had several large port cities and urban areas on the coast that attracted immigration, industrialization, and finance through most of the country's history.  
A. northeast  
B. southeast  
C. northwest  
D. southwest

21. During the *Journey of Alvar Nuñez Cabeza de Vaca*, the group first departed in June 1527, but did not arrive in Florida until \_\_\_\_\_.  
A. July 1527  
B. April 1528  
C. June 1529  
D. December 1530

22. The idea of a limited central government that is in use in the United States today can trace its origins to the traditions established by the \_\_\_\_\_.  
A. Federalist Papers  
B. Olive Branch Petition  
C. Magna Carta  
D. Declaration of Independence

23. Gold, Glory, and God describe three \_\_\_\_\_ of European countries seeking colonies.  
A. discouragements  
B. obstacles  
C. governments  
D. motivations

24. Coronado mentioned in his *Report to the King of Spain* that the best place he found during his explorations for producing the products of Spain was \_\_\_\_\_.

- A. the province of Quivira
- B. a settlement on the South Sea
- C. the province of Cibola
- D. the river of Tiguex

25. Private property, entrepreneurship, and competition are all features of the \_\_\_\_\_.

- A. command economy
- B. free enterprise system
- C. socialist economic system
- D. communist economy

**Features of American Colonies**

- Representative government
- Basic rights of citizens
- Protections for private property

26. The traits listed above were traditions from \_\_\_\_\_ government that heavily influenced colonists.

- A. France's
- B. the Cherokee
- C. the Spanish
- D. England's

27. Japan and South Korea were heavily influenced by the \_\_\_\_\_ after WWII and during the 1950s, which led them to adopt limited governments.

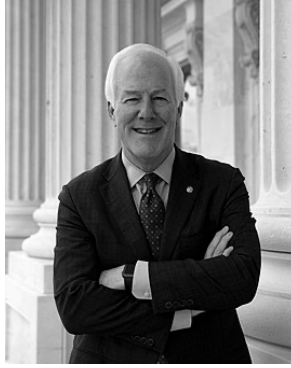
- A. Soviet Union
- B. United Nations
- C. United States
- D. Chinese

28. Comanche, Apache, and Kiowa were all cultures most associated with the \_\_\_\_\_ region.

- A. Gulf Coast
- B. Piney Woods
- C. Great Plains
- D. Mississippi Valley

29. The \_\_\_\_\_ region of Texas is divided into the three main sub-regions of forested East Texas, the humid prairies, and the sub-humid plains of South Texas.

- A. Great Plains
- B. Mountains and Basin
- C. Eastern Woodlands
- D. Coastal Plains



30. Current United States Senator for Texas, \_\_\_\_\_ is shown in the picture above.
- A. Mitch McConnell
  - B. John Cornyn
  - C. Sid Miller
  - D. Greg Abbott
31. In Coronado's *Report to the King of Spain*, he wrote that he did not think a Spanish settlement would be possible due to all of the following reasons **EXCEPT** \_\_\_\_\_.
- A. the area was too cold during the winters
  - B. the area does not have sources of wood
  - C. the area was too difficult to defend from invasion
  - D. the area does not have enough material to make cloth
32. Many of the European powers that explored North America in the 16th and 17th centuries were looking for a faster trade route to \_\_\_\_\_.
- A. Africa
  - B. Asia
  - C. South America
  - D. the Mediterranean
33. All of the following are responsible for administering public education in Texas **EXCEPT** for the \_\_\_\_\_.
- A. Texas Education Agency
  - B. Education Council of Texas
  - C. State Board of Education
  - D. Commissioner of Education
34. Laissez-faire refers to the idea that the government should \_\_\_\_\_.
- A. have a limited influence on the economy
  - B. make most decisions concerning what should be produced
  - C. promote innovation by financing business and research
  - D. make laws that promote education and civic participation
35. The British policy of \_\_\_\_\_ towards its North American colonies resulted in a lack of enforcement of some laws and rules, especially those concerning trade.
- A. decriminalization
  - B. salutary neglect
  - C. mercantilism
  - D. indirect rule
36. The \_\_\_\_\_ sets policies and standards for Texas public schools. This involves reviewing and adopting instructional materials.
- A. Texas Legislature
  - B. Governor's office
  - C. State Board of Education
  - D. Commissioner of Education



37. All of the following are examples of economic institutions **EXCEPT** for \_\_\_\_\_.  
A. agricultural practices  
B. trade  
C. holiday traditions  
D. exchange of money
38. The Great Plains region of Texas is located mainly in the \_\_\_\_\_ and is characterized by canyons, escarpments, and plateaus.  
A. Texas Gulf Coast  
B. Texas Panhandle  
C. Permian Basin  
D. Eastern Woodlands
39. \_\_\_\_\_ is necessary for a representative government to continue to be successful.  
A. Civic participation  
B. Economic participation  
C. Uniform voter turnout  
D. Volunteering in the armed forces
40. Coronado's *Report to the King of Spain* stated that Natives told him false stories about great settlements to try and \_\_\_\_\_.  
A. have his forces attack their enemies in those lands  
B. help them explore new areas they had not seen  
C. help them find new food sources and kill more animals  
D. have his forces die of hunger while searching

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ SOCIAL STUDIES  
FALL/WINTER DISTRICT TEST – GRADES 7 & 8**

**Answer Key**

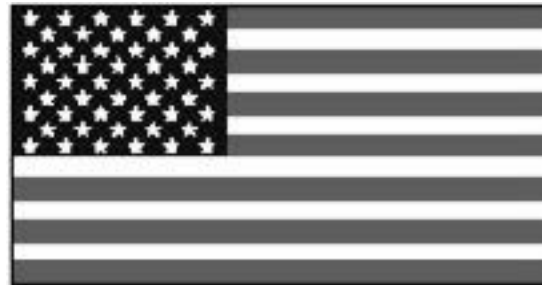
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| 1. A  | 21. B |
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| 3. A  | 23. D |
| 4. B  | 24. A |
| 5. C  | 25. B |
| 6. A  | 26. D |
| 7. B  | 27. C |
| 8. A  | 28. C |
| 9. C  | 29. D |
| 10. B | 30. B |
| 11. A | 31. C |
| 12. A | 32. B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

**SPRING DISTRICT 2024-2025**

**A+ ACADEMICS**



University Interscholastic League



# Social Studies

grades 7 & 8

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**UNIVERSITY INTERSCHOLASTIC LEAGUE**  
**2024-25 A+ SOCIAL STUDIES**  
**SPRING DISTRICT TEST – GRADES 7 & 8**

1. The \_\_\_\_\_ were known for building dome shaped huts, having an organized government, and having women play important roles in their culture. They also introduced the word “tejas” to Europeans.  
A. Wichita  
B. Tigua  
C. Caddo  
D. Atakapan
2. During the *Journey of Álvar Núñez Cabeza de Vaca*, he and about 40 survivors wrecked on an island they eventually called \_\_\_\_\_.  
A. This Island of Ill-Fate  
B. Francisco Island  
C. Port Redemption  
D. Port Arthur
3. In Texas, local \_\_\_\_\_ are elected by the citizens of their communities to oversee the management of schools and their operations.  
A. city councils  
B. school boards  
C. Parent Teacher Organizations  
D. Education Agency
4. Enlightenment thinkers, such as John Locke, helped popularize the idea that governments should be \_\_\_\_\_ amongst its citizens.  
A. feared and respected  
B. seen as god-like  
C. a social contract  
D. chosen yearly
5. *La Relación*, written by \_\_\_\_\_, inspired other Spanish explorers, such as Marcos de Niza, to search for gold in Cibola.  
A. Hernando de Soto  
B. Álvar Núñez Cabeza de Vaca  
C. Francisco Vasquez de Coronado  
D. Ferdinand Magellan
6. The 10th Amendment of the U.S. Constitution reserves powers for the \_\_\_\_\_.  
A. federal governments  
B. executive branch  
C. judicial branch  
D. state governments
7. During the *Journey of Álvar Núñez Cabeza de Vaca*, he was enslaved by various tribes including the \_\_\_\_\_.  
A. Navajo and Apache  
B. Hans and Capoques  
C. Aztec and Maya  
D. Seminole and Creek



14. In the early to mid-1800s, states in the \_\_\_\_\_ part of the U.S. supported the use of the federal government to aid in construction of roads, canals, and increased transportation opportunities to help connect their newer settlements to more established markets.
- A. western
  - B. eastern
  - C. northern
  - D. southern
15. In his report to the King of Spain, Coronado stated that he found the area he explored to be \_\_\_\_\_.
- A. exactly as Friar Marcos had described
  - B. even more rich than Friar Marcos had described
  - C. nothing like Friar Marcos described
  - D. a new place that was not previously known

### **The Establishment Clause**

*"Congress shall make no law respecting an establishment of religion,"*

16. The establishment clause of the \_\_\_\_\_ guarantees that the government cannot mandate a religion.
- A. 5<sup>th</sup> Amendment
  - B. 4<sup>th</sup> Amendment
  - C. 10<sup>th</sup> Amendment
  - D. 1<sup>st</sup> Amendment
17. \_\_\_\_\_ is the largest metropolitan area in Texas.
- A. San Antonio
  - B. Austin
  - C. Dallas-Ft. Worth
  - D. El Paso
18. The names of places in Texas such as Corpus Christi, Comal, and Hidalgo are examples of the influence of the \_\_\_\_\_ language in Texas history.
- A. Spanish
  - B. French
  - C. Tonkawa
  - D. Karankawa
19. Boston, New York City, and Philadelphia are all significant urban centers with major ports connected to the \_\_\_\_\_.
- A. Gulf of Mexico
  - B. Pacific Ocean
  - C. Atlantic Ocean
  - D. Great Lakes
20. Coronado's Report to the King of Spain stated that he was sure there \_\_\_\_\_ in the area he explored.
- A. was no water source
  - B. was no gold
  - C. were more animals than in Europe
  - D. were hidden cities
21. Today, most South American countries feature \_\_\_\_\_.
- A. command economies
  - B. unlimited governments
  - C. limited governments
  - D. monarchies

22. All of the following are geographic regions in Texas **EXCEPT** for the \_\_\_\_\_.  
A. Guadalupe Mountains  
B. Hill Country  
C. Rio Grande Valley  
D. Red River Valley
23. All of the following are features of the free enterprise system **EXCEPT** for \_\_\_\_\_.  
A. public ownership of utilities  
B. consumer choice  
C. competition  
D. profit motive
24. Coronado reported to the King of Spain that he found foods, like nuts and sweet grapes, similar to \_\_\_\_\_.  
A. those found in South America  
B. those found in Spain  
C. nothing he had ever seen  
D. what he had heard in legends
25. The discrimination and attacks on Uighurs in China by the government is an example of \_\_\_\_\_ by an unlimited government.  
A. suppression of political dissidents  
B. human rights abuses  
C. censoring of information  
D. limiting free speech
26. All of the following are examples of Spanish influence on names of foods popular in Texas **EXCEPT** for \_\_\_\_\_.  
A. enchiladas  
B. tortillas  
C. tamales  
D. kolaches
27. The \_\_\_\_\_ was an area of settlements stretching across the south central part of Texas from around Galveston and the coast to Kerrville and the Hill Country.  
A. German Belt  
B. French Quarter  
C. Irish diaspora  
D. Swedish enclave

- Adobe
- Hacienda
- Presidio

28. All of the above are Spanish terms that are used to describe \_\_\_\_\_.  
A. systems of government  
B. ranks in the military  
C. elected officials  
D. types of buildings
29. All of the following are benefits of the free enterprise system **EXCEPT** for \_\_\_\_\_.  
A. responsive prices  
B. equal distribution  
C. consumer choice  
D. variety of goods

*"{This} has hindered me, because I have been forced to send captains and men in many directions to find out whether there was anything in the country which could be of service to Your Majesty."*

30. In Coronado's Report to the King of Spain, he stated that one of the difficulties in finding information about the areas was that \_\_\_\_\_.

- A. Native writings could not be translated
- B. Natives refused to speak to him or his men
- C. Natives spoke a different language in each village
- D. Natives knew nothing about other people in the area

31. All of the following are examples of countries with unlimited government **EXCEPT** for \_\_\_\_\_.

- A. Saudi Arabia
- B. Australia
- C. Iran
- D. Cuba

32. Many immigrant groups from \_\_\_\_\_ came to Texas fleeing the upheaval caused by conflicts across the continent in 1848.

- A. Europe
- B. Asia
- C. South America
- D. Africa

### **Countries Competing to Establish Colonies in North America**

- England
- Spain
- ?

33. Exploration of North America was mainly sparked by competition between the European powers of England, Spain, and \_\_\_\_\_.

- A. Germany
- B. Italy
- C. France
- D. Belgium

34. The *Journey of Álvar Nuñez Cabeza de Vaca* started with about 600 men, but more than 140 stayed at their first stop due to \_\_\_\_\_.

- A. sickness and disease that spread rapidly
- B. promises made to them by people in Santo Domingo
- C. being captured by French naval forces
- D. ships being sunk coming into the jagged harbor



- Right to petition
- Right to a trial
- Freedom from excessive bail and punishments

35. Many of the rights first listed in the \_\_\_\_\_ in 1689 acted as inspiration for the first ten amendment of the U.S. Constitution.
- |                                      |                           |
|--------------------------------------|---------------------------|
| A. Magna Carta                       | C. English Bill of Rights |
| B. Fundamental Orders of Connecticut | D. Mayflower Compact      |
36. Alexander Hamilton, John Jay, and James Madison argued in the \_\_\_\_\_ that the U.S. Constitution would make the country more stable while still limiting the powers of the government.
- |                                      |                                 |
|--------------------------------------|---------------------------------|
| A. Federalist Papers                 | C. Committees of Correspondence |
| B. Kentucky and Virginia Resolutions | D. Declaration of Independence  |
37. \_\_\_\_\_ immigrants were not a significant group in Texas until the 1970s when large numbers sought to escape a communist regime and seek more economic opportunities.
- |               |            |
|---------------|------------|
| A. Chinese    | C. Polish  |
| B. Vietnamese | D. Russian |
38. In order to expand the economies of the European nations, they required \_\_\_\_\_ from potential colonies in North America.
- |                  |                       |
|------------------|-----------------------|
| A. raw materials | C. manufactured goods |
| B. laborers      | D. immigration        |
39. The \_\_\_\_\_ was established in 1949 as the state of Texas' administrative agent to supervise the public school system.
- |   |
|---|
| A. State Board of Education                   |
| B. Texas Education Agency                     |
| C. State Superintendent of Public Instruction |
| D. University of Texas Board of Regents       |
40. During the *Journey of Álvar Nuñez Cabeza de Vaca* while on an island, he and his company were asked to act as \_\_\_\_\_ for the Natives. When they tried to refuse, their food was withheld.
- |                 |                 |
|-----------------|-----------------|
| A. entertainers | C. medicine men |
| B. watchmen     | D. raiders      |

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2024-25 A+ SOCIAL STUDIES  
SPRING DISTRICT TEST —GRADES 7 & 8**

**Answer Key**

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