

MATHEMATICS (updated 2/10/20)

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UIL Test Comments — 2019-20

*** **NOTE:** See **Off on a Tangent** below for information on workshops, Student Activity Conferences, and test discussions ***

SAC - - - > No errors reported at this time. (Release dates: 9/7/19-11/2/19)

A - - - > #23 - should be "consonant" not "constant"
#27 - there is a typo on the key ... should be A not E. (see **Test Discussions** below)
#33 - should be A not C (see **Test Discussions** below)
#48 - top function should have "less than only" symbols, "not less than or equal to" and there should be an open bracket after the 5 in the answer choices, not a closed bracket.
#50 - typo on answer choice (C) ... it should be 336 not 337 (Release dates: 1/10/20 - 2/1/20)

B - - - > #22 - there is a typo on the key
#34 - should say "with replacement" not "without replacement"
#40 - there is a typo on the key (Release dates: 2/7/20 - 3/14/20)

District - - - (Release dates: 3/23/20 - 3/28/20)

Regional - - - > (Release dates: 4/17/20 - 4/18/20)

State - - - > (Release date: 5/1/20 - 5/2/20)

TMSCA Test Comments — 2019-20 (tests I write for TMSCA)

6 - - - > #40 - the "-" 75 radians in the problem should have been "+" 75 radians.
(Release date: 12/07/19)

13 - - - > (Release date: 3/07/20)

State - - - > (Release date: 3/21/20)

Off on a Tangent

Workshops and/or Presentations I will be doing:

1. UIL Capitol Conference, Austin - June 25-26, 2019.
2. *What's Your 10th Problem* - Math Camp at Texas Tech University, Lubbock on July 9-13, 2019.
For more information contact Jack Barton at jack.barton@ttu.edu or 806-742-2350.
NOTE: *What's Your 11th Problem* - Math Camp at Texas Tech University, Lubbock is scheduled for July 13-17, 2020 ... contact Jack.
Camp includes number sense, mathematics, calculator, science, and computer science
3. Student Activity Conferences:

- A. Sept. 7, 2019 - Tyler Junior College, Tyler
- B. Sept. 21, 2019 - Texas A & M University - Corpus Christi
- C. Oct. 26, 2019 - University of Texas at Austin
- D. Nov. 2, 2019 - Texas Tech University, Lubbock

2019 Student Activity Conference (SAC) information: (Time Schedule is tentative)

- 9:00-10:30 a.m. ---- Number Sense contest: guidelines, rules, resources, practice materials, etc.
- SAC 2019 Number Sense Test (take/grade) NEW 10 min-80 question test
- Q&A - discuss/answer questions from the test

- 10:45–noon ---- Mathematics contest: guidelines, rules, resources, practice materials, etc.
- SAC 2019 Mathematics Test (take/grade) New 20 min-30 question test
- Q&A - discuss/answer questions from the test

- 12:15-1:30 p.m. ---- Number Sense Contest and Mathematics Contest Jam Session:
- Previous year's problems: bring your problems - we will try to solve them
- (time permitting) ---- "Developing Number Sense" problems --- 1926
- (time permitting) ---- Number Sense examples from the first 5th/6th grade test --- 1983

NOTE: For those of you not able to attend one of the SACs, all presentations, tests, keys, etc. should be posted on the UIL Academic website following the Lubbock SAC.
<https://www.uil texas.org/academics/student-activities/corpus-2019>

Resources Update

The mathematics contest is a curriculum based contest. The best resources for the contest are the courses and textbooks adopted by the state of Texas.

Test Discussions

NOTE: The district, regional, and state tests will be created based on the concepts and problems from these 6 practice tests: SAC, TMSCA 6, UIL A, UIL B, TMSCA 13, & TMSCA STATE.

NOTE: If a concept is addressed by a problem(s) from these 6 practice tests, then other types of problems in that concept area can appear on the district, regional, and state tests.

#27. The domain of this $f(x)$ is $(-\infty, 0) \cup (0, +\infty)$, for x not equaling 0.
 The range is $(-\infty, 5]$, for $\{y \mid y \leq 5\}$.

#33. What I was looking for on this question was the 15th term, but the way it is stated it asks for the 15th Fibonacci number. There is a difference in how the question is asked.
 The number 0 (F_{sub0}) is the zero term. The number 1 (F_{sub1}) is the first term, 1 (F_{sub2}) the second term, 2 (F_{sub3}) the third term, ... 3 - 4th, 5 - 5th, 8 - 6th, 13 - 7th, 21 - 8th, 34 - 9th, 55 - 10th, 89 - 11th, 144 - 12th, 233 - 13th, 377 - 14th, 610 - 15th,
 This is all somewhat similar to the rows of Pascal's triangle. The 1 at the top of the first line is called the "0th row"; $(a+b)^0 = 1$. The second line is "1 1" is the 1st row; $(a+b)^1 = 1a + 1b$. The third line is "1 2 1" is the 2nd row; $(a+b)^2 = 1a^2 + 2ab + 1b^2$... etc.
 With all this said, if you were to list the first fifteen Fibonacci numbers it would be:
 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377.
 So, depending on the way in which the question is asked, the answer will be different.
 What is the 15th term of the Fibonacci sequence? 610
 What is the 15th Fibonacci number? 377
 Thus, in the case of problem #33 on this test, the answer should have been (A) 377.

STATE MEET PROOFERS AND GRADERS

Coaches of the regional team champions and the coaches of the regional wild card teams will be needed to proof the state test (while the contestants are testing) and grade the tests.

Note:

You must be a full time employee of the school district.

You must be listed as the team's coach.

You must be willing to stay in the proofing/grading room until **all** proofing **and** grading is complete.

(Please do not agree to proof and grade if you are not going to be in the room at the designated time.)

If you are one of the 24 regional team championship coaches or one of the 6 regional wild card team coaches, you need to email me no later than April 27 with the following information:

Number Sense Contest Regional Team Champion _____ Wild Card Team _____

Name _____ School & District _____

Classification _____ Region # _____ District # _____

I will _____ will not _____ be able to help proof and grade the test.

I will send you a reply confirming that I received your email. If you do not receive an email back from me then I did not receive your email. Hence, I will begin a search for a replacement for you beginning April 28. Email me at **texasmath@centex.net**.

Good Luck! Work Hard! Play Fair!

I am off on another tangent ...