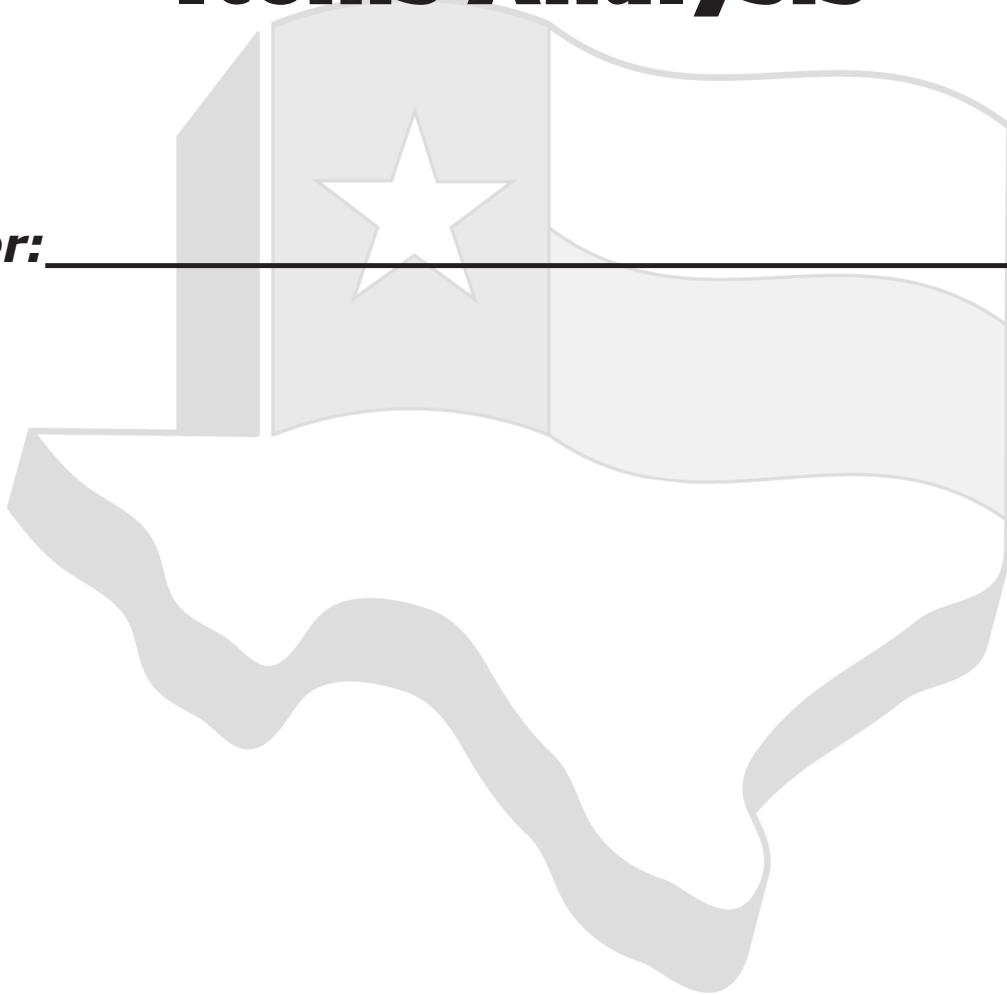


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# **Fifth Grade Mathematics**

## **2017 Released Items Analysis**

**Teacher:** \_\_\_\_\_



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Edition I



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# 5th Grade Mathematics

Released Items

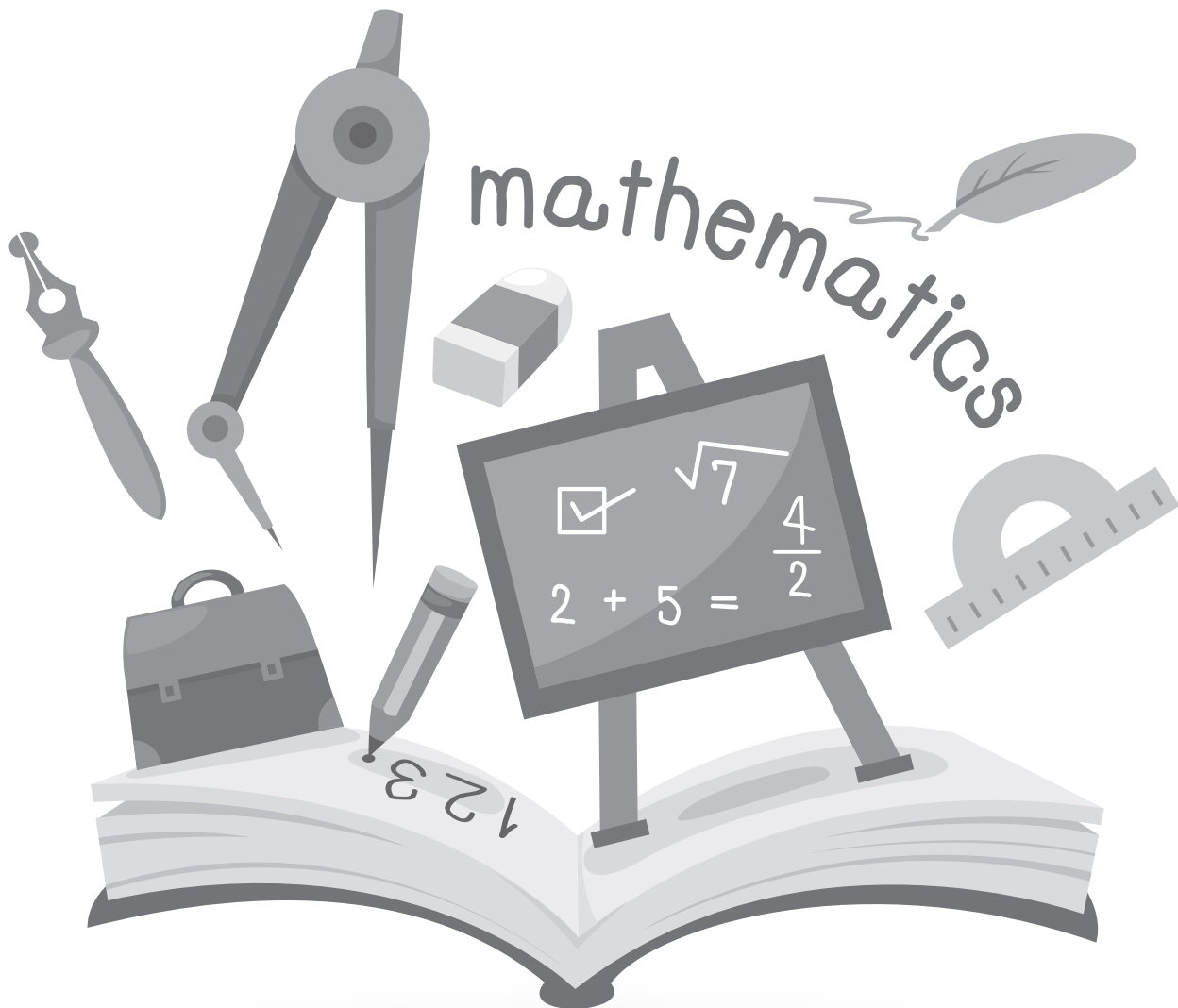
Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

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## **Instructional Analysis** **2017 Released Test**



**TEKS 5.2B Readiness Standard**

compare and order two decimals to thousandths and represent comparisons using the symbols  $>$ ,  $<$ , or  $=$

**ITEM**

**2** A scientist compared these two measurements.

$$13.068 \text{ kg} \quad \square \quad 13.608 \text{ kg}$$

Which symbol makes this comparison true?

- F**  $>$
- G**  $<$
- H**  $=$
- J**  $+$

**Item Analysis**

<b>Verb</b>	Compare
<b>Using or Including</b>	Symbols
<b>Concept</b>	Decimals to Thousandths Place
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.2B Readiness Standard**

compare and order two decimals to thousandths and represent comparisons using the symbols  $>$ ,  $<$ , or  $=$

**ITEM**

**25** Which list shows the numbers NOT in order from least to greatest?

- A**  $4.036 < 4.08 < 4.2 < 4.201$
- B**  $3.09 < 3.1 < 3.607 < 3.9$
- C**  $6.4 < 6.51 < 6.387 < 6.995$
- D**  $7.315 < 7.38 < 7.406 < 7.5$

**Item Analysis**

<b>Verb</b>	Compare and Order
<b>Using or Including</b>	Symbols
<b>Concept</b>	Decimals to Thousandths Place
<b>Process TEKS</b>	<b>5.1B, 5.1F</b>

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**TEKS 5.2C Supporting Standard**  
round decimals to tenths or hundredths

**ITEM**

**18** Mr. Ávalos has 9.375 liters of paint. What is this number rounded to the nearest hundredth?

- F** 9.40
- G** 9.38
- H** 9.37
- J** 9.47

**Item Analysis**

<b>Verb</b>	Round
<b>Using or Including</b>	Hundredths
<b>Concept</b>	Decimals
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.4A Supporting Standard**  
identify prime and composite numbers

**ITEM**

**13** Brenda said that the number 2 is prime because it has only two factors. Carla said that the number 2 is composite because it is even, and all even numbers are composite. Who is correct?

- A** Brenda is correct.
- B** Carla is correct.
- C** Both of them are correct.
- D** Neither of them is correct.

**Item Analysis**

<b>Verb</b>	Identify
<b>Using or Including</b>	NA
<b>Concept</b>	Prime and Composite
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1G</b>

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**TEKS 5.4F Readiness Standard**

simplify numerical expressions that do not involve exponents, including up to two levels of grouping

**ITEM**

**16** Margaret opened a new case of lightbulbs.

- The case contained 3 boxes of lightbulbs with 8 lightbulbs in each box.
- Margaret threw 2 of these lightbulbs in the trash because they were damaged.
- Then she took 7 of the lightbulbs out of the case.

Which expression can be used to show that there are 15 lightbulbs still in the case?

- F**  $3 \times 8 - 2 + 7$   
**G**  $3(8) - 2(7)$   
**H**  $3 \times 8 - (2 + 7)$   
**J**  $3 + 8 - 2 + 7$

**Item Analysis**

<b>Verb</b>	Simplify
<b>Using or Including</b>	Two Levels of Grouping
<b>Concept</b>	Numerical Expressions
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.4F Readiness Standard**

simplify numerical expressions that do not involve exponents, including up to two levels of grouping

**ITEM**

**32** An expression is shown.

$$8 \times (3.8 + 13.2) - 6$$

What value is equivalent to the expression?

- F** 37.6  
**G** 61.4  
**H** 130  
**J** 88

**Item Analysis**

<b>Verb</b>	Simplify
<b>Using or Including</b>	Two Levels of Grouping
<b>Concept</b>	Numerical Expressions
<b>Process TEKS</b>	<b>5.1B, 5.1F</b>

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**TEKS 5.3A Supporting Standard**

estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division

**ITEM**

**31** The list shows the length of a day on two different planets.

- Neptune: 16.11 hours
- Venus: 5,832.40 hours

Which statement is best supported by this information?

- A** A day on Venus is about 40 times as long as a day on Neptune.
- B** A day on Venus is about 400 times as long as a day on Neptune.
- C** A day on Venus is about 50 times as long as a day on Neptune.
- D** A day on Venus is about 500 times as long as a day on Neptune.

**Item Analysis**

<b>Verb</b>	Estimate
<b>Using or Including</b>	Multiplication
<b>Concept</b>	Determine Solutions
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1C, 5.1G</b>

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**TEKS 5.3B Supporting Standard**

multiply with fluency a three-digit number by a two-digit number using the standard algorithm

**ITEM**

**12** Aspen added 14 to the product of 224 and 16. What is this sum?

- F** 3,478
- G** 3,598
- H** 3,808
- J** 3,584

**Item Analysis**

<b>Verb</b>	Multiply
<b>Using or Including</b>	Standard Algorithm
<b>Concept</b>	Three-Digit by Two-Digit
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.3C Supporting Standard**

solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm

**ITEM**

**22** In a school auditorium there are 33 seats in each row of seats. How many rows are needed for 528 students to each have a seat?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Strategies
<b>Concept</b>	Quotients
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.3E Readiness Standard**

solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers

**ITEM**

**17** Mia's dog weighs 32.6 pounds. Lettie's dog weighs 3.8 times as much as Mia's dog. What does Lettie's dog weigh in pounds?

- A** 36.40 lb
- B** 12.388 lb
- C** 96.48 lb
- D** 123.88 lb

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Strategies
<b>Concept</b>	Products to the Hundredths
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.3E Readiness Standard**

solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers

**ITEM**

**35** Mr. Roosevelt has 48 nails that each weigh 1.35 ounces. What is the weight of these nails in ounces?

- A** 50.4 oz
- B** 40.4 oz
- C** 64.8 oz
- D** 16.2 oz

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Strategies
<b>Concept</b>	Products to the Hundredths
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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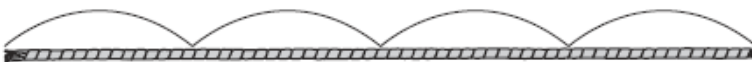
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**TEKS 5.3F Supporting Standard**

represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models

**ITEM**

**19** The length of a piece of yarn is 19.2 units. Jesse cut the piece of yarn into 4 smaller pieces that were all the same length. Which expression represents the length of each smaller piece of yarn?



- A**  $19.2 \times 4$
- B**  $19.2 - 4$
- C**  $19.2 \div 4$
- D**  $19.2 + 4$

**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Pictorial Model
<b>Concept</b>	Quotients of Decimals
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1E, 5.1F</b>

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**TEKS 5.3G Readiness Standard**

solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm

**ITEM**

**1** Amber saved a total of \$3.20 over 5 weeks. She saved the same amount of money each week. How much money did Amber save each week?

- A** \$1.44
- B** \$1.56
- C** \$0.64
- D** \$1.80

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Standard Algorithms
<b>Concept</b>	Quotients of Decimals
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.3G Readiness Standard**

solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm

**ITEM**

**33** Ms. Sikes paid a total of \$95.40 for a 12-month magazine subscription. She paid the same amount each month. What amount did Ms. Sikes pay each month?

- A** \$7.95
- B** \$7.96
- C** \$1,144.80
- D** \$107.40

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Standard Algorithms
<b>Concept</b>	Quotients of Decimals
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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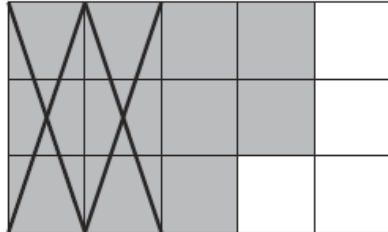
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**TEKS 5.3H Supporting Standard**

represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations;

**ITEM**

**4** The shaded part of the model represents a fraction. Another fraction was subtracted from the first fraction.



Which expression does the model represent?

- F**  $\frac{11}{15} - \frac{1}{6}$
- G**  $\frac{11}{12} - \frac{6}{12}$
- H**  $\frac{6}{15} - \frac{11}{12}$
- J**  $\frac{11}{15} - \frac{2}{5}$

**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Pictorial Models
<b>Concept</b>	Subtraction of Fractions
<b>Process TEKS</b>	<b>5.1B, 5.1E, 5.1F</b>

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**TEKS 5.3K Readiness Standard**

add and subtract positive rational numbers fluently

**ITEM**

**10** The table shows the heights and masses of a male gorilla and a female gorilla at a zoo.

Gorillas		
	Height (m)	Mass (kg)
Male	1.68	158.757
Female	1.448	95.25

Based on the table, which statement is true?

- F** The combined mass of the male gorilla and the female gorilla is 253.782 kg.
- G** The mass of the male gorilla is 63.507 kg greater than the mass of the female gorilla.
- H** The female gorilla is 1.28 m shorter than the male gorilla.
- J** The combined height of the male gorilla and the female gorilla is 2.028 m.

**Item Analysis**

<b>Verb</b>	Add and Subtract
<b>Using or Including</b>	Fluently
<b>Concept</b>	Positive Rational Numbers
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1E, 5.1F</b>

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**TEKS 5.3K Readiness Standard**  
add and subtract positive rational numbers fluently

**ITEM**

**21** A park bench is located  $16\frac{3}{4}$  feet due north of an elm tree. A fountain is located  $9\frac{1}{2}$  feet due south of the same elm tree. What is the distance in feet between the park bench and the fountain?

- A**  $26\frac{1}{4}$  ft
- B**  $25\frac{1}{4}$  ft
- C**  $25\frac{2}{3}$  ft
- D** 26 ft

**Item Analysis**

<b>Verb</b>	Add
<b>Using or Including</b>	Fluently
<b>Concept</b>	Positive Rational Numbers
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.3L Readiness Standard**  
divide whole numbers by unit fractions and unit fractions by whole numbers

**ITEM**

**8** The math team does practice drills that each last  $\frac{1}{6}$  hour. In February the team did practice drills for a total of 24 hours. How many practice drills did the math team do in February?

- F** 4
- G** 144
- H** 30
- J** 240

**Item Analysis**

<b>Verb</b>	Divide
<b>Using or Including</b>	NA
<b>Concept</b>	Whole Number by Unit Fraction
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.3L Readiness Standard**  
divide whole numbers by unit fractions and unit fractions by whole numbers

**ITEM**

**29** Ms. Olsen has  $\frac{1}{8}$  acre of land divided into 6 equal parts. What is the size of each part?

- A**  $\frac{1}{2}$  acre
- B**  $\frac{1}{14}$  acre
- C**  $\frac{3}{4}$  acre
- D**  $\frac{1}{48}$  acre

**Item Analysis**

<b>Verb</b>	Divide
<b>Using or Including</b>	NA
<b>Concept</b>	Unit Fraction by Whole Number
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.4B Readiness Standard**  
represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity

**ITEM**

**14** Theo earned \$500 selling food at a carnival. He earned \$260 selling nachos and the rest selling hot dogs for \$2 each. Theo used this equation to find  $h$ , the number of hot dogs he sold at the carnival.

$$h = (500 - 260) \div 2$$

How many hot dogs did Theo sell at the carnival?

- F** 380
- G** 180
- H** 370
- J** 120

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Equation Letter for the Unknown
<b>Concept</b>	Multi-Step Problem
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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**TEKS 5.4B Readiness Standard**

represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity

**ITEM**

**26** Mr. Gonzales is putting in a fence around the perimeter of a playground.

- The perimeter of the playground is 144 ft.
- Each section of the fence is 4 ft long and costs \$12.

Which equation can Mr. Gonzales use to find  $b$ , the cost of the sections of fence he needs for the playground?

- F**  $144 \div (12 \div 4) = b$   
**G**  $(12 \times 4) \times 144 = b$   
**H**  $144 \div (12 \times 4) = b$   
**J**  $(144 \div 4) \times 12 = b$

**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Equations Letter for Unknown
<b>Concept</b>	Multi-Step Problem
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1E, 5.1F</b>

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**TEKS 5.4C Readiness Standard**

generate a numerical pattern when given a rule in the form  $y = ax$  or  $y = x + a$  and graph

**ITEM**

**5** The relationship between numbers in List X and List Y follows the rule  $y = x + 2.05$ . Which diagram shows this relationship?

<p><b>F</b></p> <table border="1"> <thead> <tr> <th>List X</th> <th>List Y</th> </tr> </thead> <tbody> <tr><td>29.1</td><td>31.6</td></tr> <tr><td>34.1</td><td>36.6</td></tr> <tr><td>39.1</td><td>41.6</td></tr> <tr><td>44.1</td><td>46.6</td></tr> </tbody> </table>	List X	List Y	29.1	31.6	34.1	36.6	39.1	41.6	44.1	46.6	<p><b>H</b></p> <table border="1"> <thead> <tr> <th>List X</th> <th>List Y</th> </tr> </thead> <tbody> <tr><td>29.1</td><td>31.15</td></tr> <tr><td>34.1</td><td>36.15</td></tr> <tr><td>39.1</td><td>41.15</td></tr> <tr><td>44.1</td><td>46.15</td></tr> </tbody> </table>	List X	List Y	29.1	31.15	34.1	36.15	39.1	41.15	44.1	46.15
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31.15	29.1																				
36.15	34.1																				
41.15	39.1																				
46.15	44.1																				

**Item Analysis**

<b>Verb</b>	Generate
<b>Using or Including</b>	$y = x + a$
<b>Concept</b>	Numerical
<b>Process TEKS</b>	<b>5.1B, 5.1D, 5.1F</b>

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**TEKS 5.4C Readiness Standard**

generate a numerical pattern when given a rule in the form  $y = ax$  or  $y = x + a$  and graph

**ITEM**

**24** Which table represents the equation  $y = 3x$ ?

**F**

x	y
3	1
6	2
15	5
18	6

**G**

x	y
1	3
3	9
4	12
7	21

**H**

x	y
1	1
3	3
5	5
7	7

**J**

x	y
1	3
4	9
6	12
7	18

**Item Analysis**

**Verb**

Generate

**Using or Including**

$y = ax$

**Concept**

Numerical Pattern

**Process TEKS**

**5.1B, 5.1D, 5.1F**

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**ITEM**

**Item Analysis**

**Verb**

**Using or Including**

**Concept**

**Process TEKS**

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**TEKS 5.4H Readiness Standard**  
represent and solve problems related to perimeter and/or area and related to volume

**ITEM**

**6** A rectangular billboard is 9.35 meters wide and 6.82 meters tall. What is the perimeter of the billboard in meters?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	NA
<b>Concept</b>	Perimeter
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1F</b>

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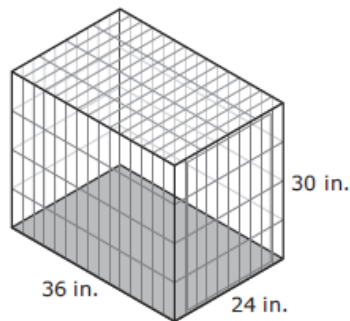


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**TEKS 5.4H Readiness Standard**  
represent and solve problems related to perimeter and/or area and related to volume

**ITEM**

**27** Gabriel bought a dog crate shaped like a rectangular prism with the dimensions shown in the model.



What is the area in square inches of the shaded floor of the dog crate?

- A** 864 square inches
- B** 1,080 square inches
- C** 720 square inches
- D** 1,296 square inches

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	NA
<b>Concept</b>	Volume
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1E, 5.1F</b>

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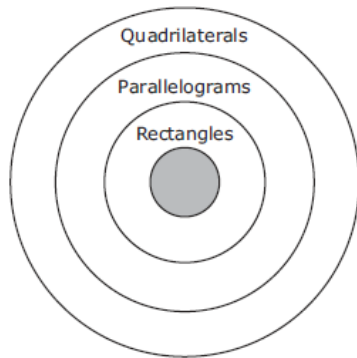


**TEKS 5.5A Readiness Standard**

classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties

**ITEM**

**15** In the diagram shown each circle represents a group of polygons. If a polygon belongs in a circle, it also belongs in any larger circle.



Which kind of polygon belongs in the shaded circle?

- A Trapezoids
- B Squares
- C Pentagons
- D Rhombuses

**Item Analysis**

<b>Verb</b>	Classify
<b>Using or Including</b>	Graphic Organizer
<b>Concept</b>	Two-Dimensional Figures
<b>Process TEKS</b>	<b>5.1B, 5.1E, 5.1F</b>

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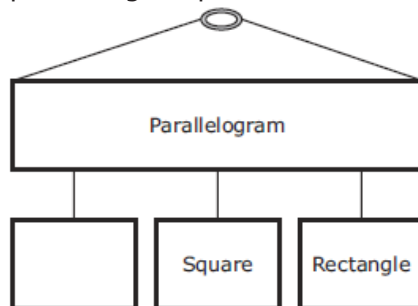
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**TEKS 5.5A Readiness Standard**

classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties

**ITEM**

**23** Nathan built the hanging mobile shown in the picture to show some relationships among shapes.



Which shape goes in the empty box in order to complete Nathan's mobile?

- A Trapezoid
- B Quadrilateral
- C Rhombus
- D Triangle

**Item Analysis**

<b>Verb</b>	Classify
<b>Using or Including</b>	Graphic Organizer
<b>Concept</b>	Two-Dimensional Figures
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1E, 5.1F</b>

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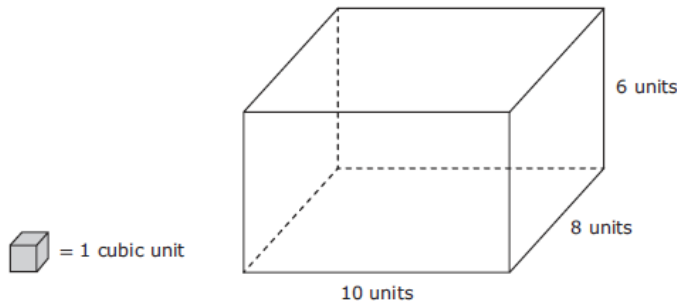
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**TEKS 5.6A Supporting Standard**

recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible

**ITEM**

**36** The shaded cube has a volume of 1 cubic unit. Cubes like this one will be used to completely fill a rectangular prism that has the dimensions shown.



How many of these shaded cubes will be needed to completely fill the rectangular prism?

- F** 48
- G** 80
- H** 160
- J** Not here

**Item Analysis**

<b>Verb</b>	Recognize
<b>Using or Including</b>	NA
<b>Concept</b>	Volume
<b>Process TEKS</b>	<b>5.1B, 5.1E, 5.1F</b>

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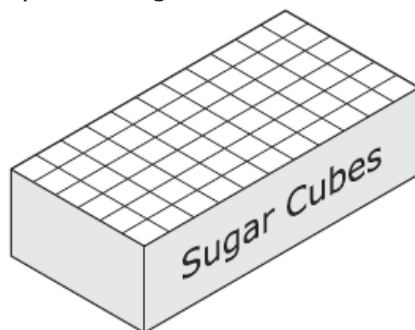
**TEKS 5.6B Supporting Standard**

determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base

**ITEM**

**3** Emily has a box shaped like a rectangular prism that is full of sugar cubes.

- Each sugar cube has a volume of 1 cubic centimeter.
- The top layer has a width of 6 cm and a length of 11 cm.
- There are 3 layers of sugar cubes.



How many sugar cubes are in the box?

- A** 198
- B** 66
- C** 594
- D** 99

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	Layers times Area of Base
<b>Concept</b>	Volume
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1E, 5.1F</b>

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**TEKS 5.8A Supporting Standard**

describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the x-coordinate, the first number in an ordered pair, indicates movement parallel to the x-axis starting at the origin; and the y-coordinate, the second number, indicates movement parallel to the y-axis starting at the origin

**ITEM**

9 What are the coordinates of the point where the x-axis and the y-axis intersect on a coordinate plane?

- A (5, 5)
- B (5, 0)
- C (0, 5)
- D (0, 0)

**Item Analysis**

<b>Verb</b>	Describe
<b>Using or Including</b>	Intersection of Origin
<b>Concept</b>	Coordinate Plane
<b>Process TEKS</b>	<b>5.1B, 5.1F</b>

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**TEKS 5.8C Readiness Standard**

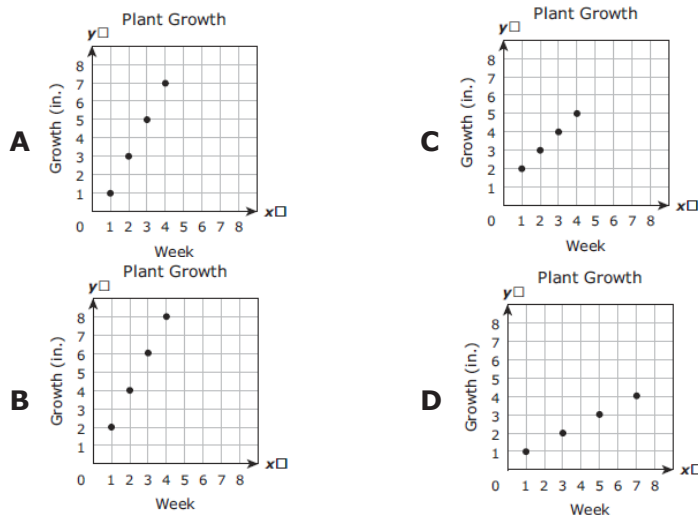
graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table

**ITEM**

Thomas planted a seed and measured the height of the stem each week for four weeks.

- The stem grew 1 inch in the first week.
- The stem grew 2 inches each week after the first week.

Which graph represents the growth of this plant?



**Item Analysis**

<b>Verb</b>	Graph
<b>Using or Including</b>	Real-World Problems
<b>Concept</b>	First Quadrant
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1D, 5.1F</b>

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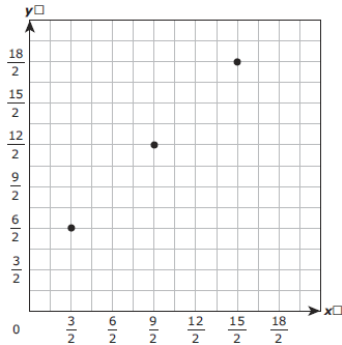
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**TEKS 5.8C Readiness Standard**

graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table

**ITEM**

**34** Three points are plotted on the coordinate grid.



Which table represents the data plotted in the graph?

**F**

x	$\frac{6}{2}$	$\frac{12}{2}$	$\frac{18}{2}$
y	$\frac{3}{2}$	$\frac{9}{2}$	$\frac{15}{2}$

**H**

x	$\frac{3}{2}$	$\frac{6}{2}$	$\frac{9}{2}$
y	$\frac{6}{2}$	$\frac{12}{2}$	$\frac{18}{2}$

**G**

x	$\frac{3}{2}$	$\frac{9}{2}$	$\frac{15}{2}$
y	$\frac{6}{2}$	$\frac{12}{2}$	$\frac{15}{2}$

**J**

x	$\frac{3}{2}$	$\frac{9}{2}$	$\frac{15}{2}$
y	$\frac{6}{2}$	$\frac{12}{2}$	$\frac{18}{2}$

**Item Analysis**

<b>Verb</b>	Graph
<b>Using or Including</b>	Input-Output Table
<b>Concept</b>	First Quadrant
<b>Process TEKS</b>	<b>5.1B, 5.1D, 5.1F</b>

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**ITEM**

**Item Analysis**

<b>Verb</b>	
<b>Using or Including</b>	
<b>Concept</b>	
<b>Process TEKS</b>	

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**TEKS 5.9A Supporting Standard**

represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots

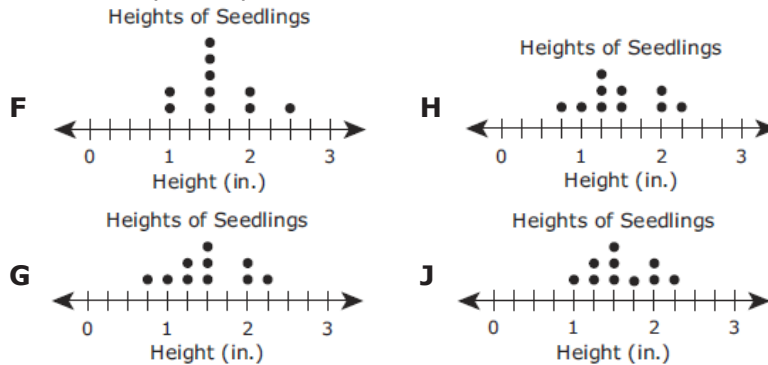
**ITEM**

**30** The table shows the heights of 10 seedlings.

Heights of Seedlings

Seedling	A	B	C	D	E	F	G	H	I	J
Height (in.)	$1\frac{1}{4}$	2	$1\frac{1}{4}$	$1\frac{1}{2}$	$\frac{3}{4}$	$2\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	1	2

Which dot plot represents these data?



**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Fractions Dot Plots
<b>Concept</b>	Categorical Data Set
<b>Process TEKS</b>	5.1A, 5.1B, 5.1D, 5.1F

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**TEKS 5.9C Readiness Standard**

solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot

**ITEM**

**7** The stem and leaf plot shows the numbers of minutes the members of a team jumped rope during practice.

Practice Times

Stem	Leaf
1	9 9
2	0 1 3
3	3 4 6 7
4	1 1 3 5 9 9
5	0 4 2
6	3 5 6

3|6 means 36 minutes.

What is the difference between the least number of minutes jumped and the greatest number of minutes jumped?

- A 47
- B 9
- C 5
- D 49

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Stem-and-Leaf Plot
<b>Concept</b>	One-Step Problem
<b>Process TEKS</b>	5.1A, 5.1B, 5.1D, 5.1F

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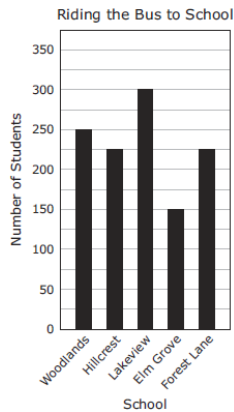
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**TEKS 5.9C Readiness Standard**

solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot

**ITEM**

**28** The graph shows the number of students at five schools who ride the bus to school.



Based on the graph, how many students ride the bus to the Woodlands, Hillcrest, and Lakeview schools?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Bar Graph
<b>Concept</b>	Problems
<b>Process TEKS</b>	<b>5.1A, 5.1B, 5.1D, 5.1F</b>

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**TEKS 5.10A Supporting Standard**

define income tax, payroll tax, sales tax, and property tax

**ITEM**

**20** A definition of a financial term is shown in the box.

A tax that includes Social Security and Medicare taxes and is paid by an employer

Which term best fits this definition?

- F** Payroll tax
- G** Property tax
- H** Sales tax
- J** Gasoline tax

**Item Analysis**

<b>Verb</b>	Define
<b>Using or Including</b>	NA
<b>Concept</b>	Payroll Tax
<b>Process TEKS</b>	<b>5.1F</b>

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**Category 1**  
**Numerical Representations and Relationships**  
**6 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
5.2A represent the value of the digit in decimals through the thousandths using expanded notation and numerals	<b>NT</b>		
5.2B compare and order two decimals to thousandths and represent comparisons using the symbols $>$ , $<$ , or $=$	<b>2</b>	<b>G</b>	
	<b>25</b>	<b>C</b>	
5.2C round decimals to tenths or hundredths	<b>18</b>	<b>G</b>	
5.4A identify prime and composite numbers	<b>13</b>	<b>A</b>	
5.4E describe the meaning of parentheses and brackets in a numeric expression	<b>NT</b>		
5.4F simplify numerical expressions that do not involve exponents, including up to two levels of grouping	<b>16</b>	<b>H</b>	
	<b>32</b>	<b>H</b>	

Shaded - Readiness TEKS, NT - Not Tested

Readiness TEKS - 4/6 questions

**Category 2**  
**Computations and Algebraic Relationships**  
**17 Total Questions**

TEKS	Item	Correct Answer	Process TEKS
5.3A estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division	<b>31</b>	<b>B</b>	
5.3B multiply with fluency a three-digit number by a two-digit number using the standard algorithm	<b>12</b>	<b>G</b>	
5.3C solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm	<b>22</b>	<b>16</b>	
5.3D represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models	<b>NT</b>		
5.3E solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers	<b>17</b>	<b>D</b>	
	<b>35</b>	<b>C</b>	
5.3F represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models	<b>19</b>	<b>C</b>	
5.3G solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm	<b>1</b>	<b>C</b>	
	<b>33</b>	<b>A</b>	
5.3H represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations	<b>4</b>	<b>J</b>	
5.3I represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models	<b>NT</b>		
5.3J represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as $1/3 \div 7$ and $7 \div 1/3$ using objects and pictorial models, including area models	<b>NT</b>		
5.3K add and subtract positive rational numbers fluently	<b>10</b>	<b>G</b>	
	<b>21</b>	<b>A</b>	
5.3L divide whole numbers by unit fractions and unit fractions by whole numbers	<b>8</b>	<b>G</b>	
	<b>29</b>	<b>D</b>	
5.4B represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity	<b>14</b>	<b>J</b>	
	<b>26</b>	<b>J</b>	
5.4C generate a numerical pattern when given a rule in the form $y = ax$ or $y = x + a$ and graph	<b>5</b>	<b>C</b>	
	<b>24</b>	<b>G</b>	
5.4D recognize the difference between additive and multiplicative numerical patterns given in a table or graph	<b>NT</b>		

Shaded - Readiness TEKS, NT - Not Tested  
 Readiness TEKS - 12/17 questions



**Category 3**  
**Geometry and Measurement**  
**9 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
5.4H represent and solve problems related to perimeter and/or area and related to volume	<b>6</b>	<b>32.34</b>	
	<b>27</b>	<b>A</b>	
5.5A classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties	<b>15</b>	<b>B</b>	
	<b>23</b>	<b>C</b>	
5.6A recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible	<b>36</b>	<b>J</b>	
5.6B determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base	<b>3</b>	<b>A</b>	
5.7A solve problems by calculating conversions within a measurement system, customary or metric	<b>NT</b>		
5.8A describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the x-coordinate, the first number in an ordered pair, indicates movement parallel to the x-axis starting at the origin; and the y-coordinate, the second number, indicates movement parallel to the y-axis starting at the origin	<b>9</b>	<b>D</b>	
5.8B describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane	<b>NT</b>		
5.8C graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table	<b>11</b>	<b>A</b>	
	<b>34</b>	<b>J</b>	

Shaded - Readiness TEKS, NT - Not Tested  
 Readiness TEKS - 6/9 questions

**Category 4**  
**Data Analysis and Personal Finance**  
**4 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
5.9A represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots	<b>30</b>	<b>G</b>	
5.9B represent discrete paired data on a scatterplot	<b>NT</b>		
5.9C solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot	<b>7</b>	<b>A</b>	
	<b>28</b>	<b>775</b>	
5.10A define income tax, payroll tax, sales tax, and property tax	<b>20</b>	<b>F</b>	
5.10B explain the difference between gross income and net income	<b>NT</b>		
5.10E describe actions that might be taken to balance a budget when expenses exceed income	<b>NT</b>		
5.10F balance a simple budget	<b>NT</b>		

Shaded - Readiness TEKS, NT - Not Tested  
 Readiness TEKS - 2/4 questions

**Category 1**  
**Numerical Representations and Relationships**  
**6 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
5.2B compare and order two decimals to thousandths and represent comparisons using the symbols $>$ , $<$ , or $=$	<b>2</b>	<b>G</b>	
	<b>25</b>	<b>C</b>	
5.4F simplify numerical expressions that do not involve exponents, including up to two levels of grouping	<b>16</b>	<b>H</b>	
	<b>32</b>	<b>H</b>	
5.2A represent the value of the digit in decimals through the thousandths using expanded notation and numerals	<b>NT</b>		
5.2C round decimals to tenths or hundredths	<b>18</b>	<b>G</b>	
5.4A identify prime and composite numbers	<b>13</b>	<b>A</b>	
5.4E describe the meaning of parentheses and brackets in a numeric expression	<b>NT</b>		

**Category 2**  
**Computations and Algebraic Relationships**  
**17 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
5.3E solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers	<b>17</b>	<b>D</b>	
	<b>35</b>	<b>C</b>	
5.3G solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm	<b>1</b>	<b>C</b>	
	<b>33</b>	<b>A</b>	
5.3K add and subtract positive rational numbers fluently	<b>10</b>	<b>G</b>	
	<b>21</b>	<b>A</b>	
5.3L divide whole numbers by unit fractions and unit fractions by whole numbers	<b>8</b>	<b>G</b>	
	<b>29</b>	<b>D</b>	
5.4B represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity	<b>14</b>	<b>J</b>	
	<b>26</b>	<b>J</b>	
5.4C generate a numerical pattern when given a rule in the form $y = ax$ or $y = x + a$ and graph	<b>5</b>	<b>C</b>	
	<b>24</b>	<b>G</b>	
5.3A estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division	<b>31</b>	<b>B</b>	
5.3B multiply with fluency a three-digit number by a two-digit number using the standard algorithm	<b>12</b>	<b>G</b>	
5.3C solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm	<b>22</b>	<b>16</b>	
5.3D represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models	<b>NT</b>		
5.3F represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models	<b>19</b>	<b>C</b>	
5.3H represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations	<b>4</b>	<b>J</b>	
5.3I represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models	<b>NT</b>		
5.3J represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as $1/3 \div 7$ and $7 \div 1/3$ using objects and pictorial models, including area models	<b>NT</b>		
5.4D recognize the difference between additive and multiplicative numerical patterns given in a table or graph	<b>NT</b>		

**Category 3**  
**Geometry and Measurement**  
**9 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
5.4H represent and solve problems related to perimeter and/or area and related to volume	<b>6</b>	<b>32.34</b>	
	<b>27</b>	<b>A</b>	
5.5A classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties	<b>15</b>	<b>B</b>	
	<b>23</b>	<b>C</b>	
5.8C graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table	<b>11</b>	<b>A</b>	
	<b>34</b>	<b>J</b>	
5.6A recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible	<b>36</b>	<b>J</b>	
5.6B determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base	<b>3</b>	<b>A</b>	
5.7A solve problems by calculating conversions within a measurement system, customary or metric	<b>NT</b>		
5.8A describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the x-coordinate, the first number in an ordered pair, indicates movement parallel to the x-axis starting at the origin; and the y-coordinate, the second number, indicates movement parallel to the y-axis starting at the origin	<b>9</b>	<b>D</b>	
5.8B describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane	<b>NT</b>		

**Category 4**  
**Data Analysis and Personal Finance**  
**4 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
5.9C solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot	<b>7</b>	<b>A</b>	
	<b>28</b>	<b>775</b>	
5.9A represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots	<b>30</b>	<b>G</b>	
5.9B represent discrete paired data on a scatterplot	<b>NT</b>		
5.10A define income tax, payroll tax, sales tax, and property tax	<b>20</b>	<b>F</b>	
5.10B explain the difference between gross income and net income	<b>NT</b>		
5.10E describe actions that might be taken to balance a budget when expenses exceed income	<b>NT</b>		
5.10F balance a simple budget	<b>NT</b>		