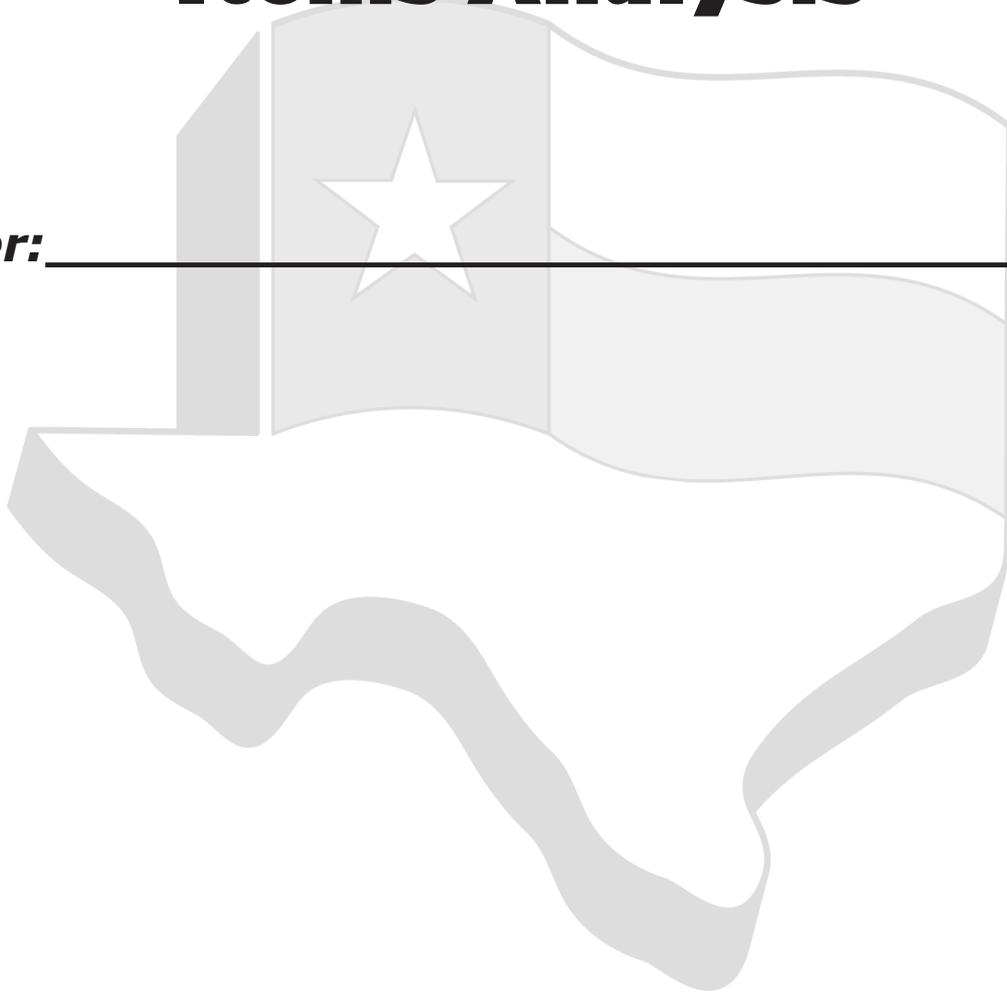


**Step Up to the TEKS**  
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# **Seventh Grade Mathematics**

## **2016 Released Items Analysis**

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



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Edition I



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# 7th Grade Mathematics

Released Items

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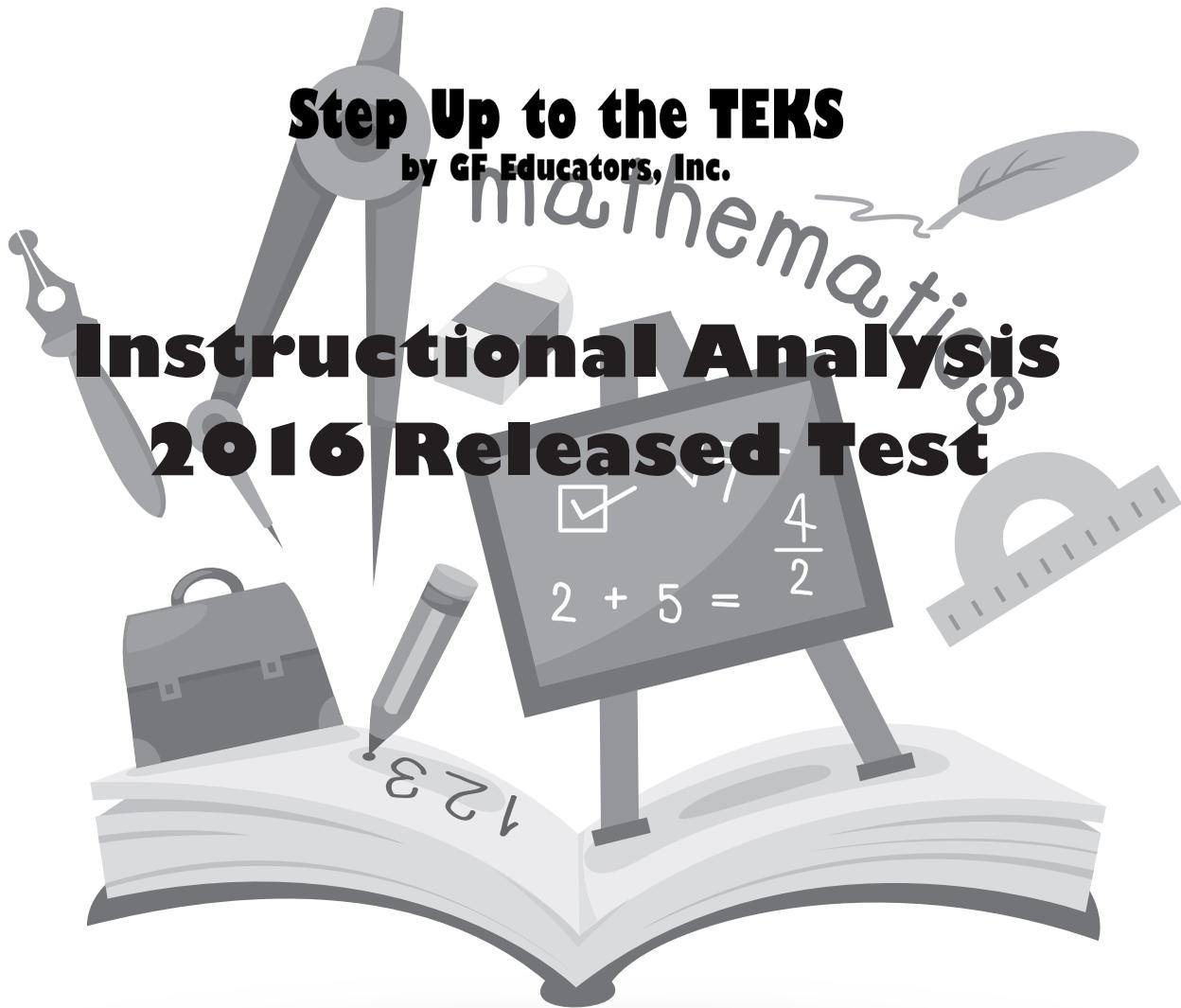
Teacher: \_\_\_\_\_

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

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## **Instructional Analysis 2016 Released Test**



**TEKS 7.2A Supporting Standard**

extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers

**ITEM**

**29** Set A represents rational numbers. Set B represents integers. Which diagram shows the numbers placed in the correct sets?

<b>A</b>		<b>C</b>	
<b>B</b>		<b>D</b>	

**Item Analysis**

<b>Verb</b>	Extend
<b>Using or Including</b>	Visual Representation Venn Diagram
<b>Concept</b>	Sets of Rational Numbers
<b>Process TEKS</b>	<b>7.1B, 7.1E, 7.1F</b>

**Notes**



**TEKS 7.6A Supporting Standard**

represent sample spaces for simple and compound events using lists and tree diagrams

**3** Bailey will roll a number cube and flip a coin for a probability experiment. The faces of the number cube are labeled 1 through 6. The coin can land on heads or tails. If Bailey rolls the number cube once and flips the coin once, which list contains only the outcomes in which the number cube lands on a number greater than 4?

- |          |  |          |  |
|----------|--|----------|--|
| <b>A</b> | 5, Heads<br>5, Tails<br>6, Heads<br>6, Tails | <b>C</b> | 1, Heads<br>1, Tails<br>2, Heads<br>2, Tails<br>3, Heads<br>3, Tails<br>4, Heads<br>4, Tails<br>5, Heads<br>5, Tails<br>6, Heads<br>6, Tails |
| <b>B</b> | 5, Heads<br>6, Tails                         | <b>D</b> | 4, Heads<br>4, Tails<br>5, Heads<br>5, Tails<br>6, Heads<br>6, Tails   |

**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Lists
<b>Concept</b>	Compound Event
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.6C Supporting Standard**  
make predictions and determine solutions using experimental data for simple and compound events

<p><b>ITEM</b> <b>32</b> At an assembly 7 out of the first 10 students who entered the gym were carrying a backpack. Based on this information, if 700 students were at the assembly, how many students could be expected to be carrying a backpack?  Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.</p>	<b>Item Analysis</b>	
	<b>Verb</b>	Make Predictions
	<b>Using or Including</b>	Experimental Data
	<b>Concept</b>	Simple Event
	<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>
<p><b>Notes</b></p> 		

**TEKS 7.6D Supporting Standard**  
make predictions and determine solutions using theoretical probability for simple and compound events

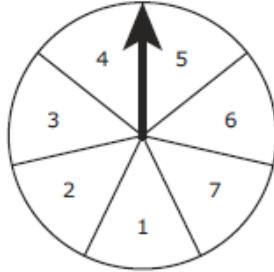
<p><b>ITEM</b> <b>26</b> A bag contains:</p> <ul style="list-style-type: none"> <li>• 5 red marbles</li> <li>• 6 blue marbles</li> <li>• 3 green marbles</li> <li>• 4 black marbles</li> <li>• 2 yellow marbles</li> </ul> <p>A marble will be drawn from the bag and replaced 100 times. What is a reasonable prediction for the number of times a green or black marble will be drawn?</p> <p><b>F</b> 14 <b>G</b> 65 <b>H</b> 7 <b>J</b> 35</p>	<b>Item Analysis</b>	
	<b>Verb</b>	Make Predictions
	<b>Using or Including</b>	Theoretical Probability
	<b>Concept</b>	Simple Event
	<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>
<p><b>Notes</b></p> 		

**TEKS 7.6E Supporting Standard**

find the probabilities of a simple event and its complement and describe the relationship between the two

**ITEM**

**40** The spinner shown is divided into congruent sections that are labeled from 1 through 7.



If the spinner is spun one time, what is the probability of the arrow **not** landing on a section labeled with an odd number?

- F  $\frac{4}{7}$
- G  $\frac{3}{4}$
- H  $\frac{1}{4}$
- J  $\frac{3}{7}$

**Item Analysis**

<b>Verb</b>	Find
<b>Using or Including</b>	NA
<b>Concept</b>	Complement to Simple Event
<b>Process TEKS</b>	7.1B, 7.1C, 7.1E, 7.1F

**Notes**



**TEKS 7.6H Readiness Standard**

solve problems using qualitative and quantitative predictions and comparisons from simple experiments

**ITEM**

**22** A store manager receives a delivery of 2 boxes of light bulbs. Each box contains 25 light bulbs. The store manager tests all the light bulbs and finds that 2 of them are defective. Based on these results, what can the store manager predict about the next delivery of light bulbs?

- F A delivery of 3 boxes will contain 3 more defective light bulbs than a delivery of 2 boxes.
- G A delivery of 4 boxes will contain 2 more defective light bulbs than a delivery of 2 boxes.
- H A delivery of 5 boxes will contain 10 more defective light bulbs than a delivery of 2 boxes.
- J A delivery of 6 boxes will contain 3 more defective light bulbs than a delivery of 2 boxes.

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Quantitative and Qualitative Predictions
<b>Concept</b>	Simple Experiments
<b>Process TEKS</b>	7.1A, 7.1B, 7.1G

**Notes**



**TEKS 7.6H Readiness Standard**

solve problems using qualitative and quantitative predictions and comparisons from simple experiments

**ITEM**

**45** Felix has a bucket of golf balls. The table shows the number of golf balls of each color in the bucket.

**Golf Balls in a Bucket**

Color	Number
Pink	4
White	11
Orange	8
Green	18

Felix selects a golf ball at random. Based on the information in the table, which statement is true?

- A** The golf ball is more likely to be green than all other colors combined.
- B** The golf ball is equally likely to be pink, white, orange, or green.
- C** The golf ball is 2 times as likely to be orange as it is to be pink.
- D** The golf ball is 7 times as likely to be green as it is to be white.

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Quantitative and Qualitative Predictions
<b>Concept</b>	Simple Experiment
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1E, 7.1G</b>

**Notes**



**TEKS 7.6I Readiness Standard**

determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces

**ITEM**

**10** Gabriel has these cans of soup in his kitchen cabinet.

- 2 cans of tomato soup
- 3 cans of chicken soup
- 2 cans of cheese soup
- 2 cans of potato soup
- 1 can of beef soup

Gabriel will randomly choose one can of soup. Then he will put it back and randomly choose another can of soup. What is the probability that he will choose a can of tomato soup and then a can of cheese soup?

- F**  $\frac{2}{5}$
- G**  $\frac{2}{45}$
- H**  $\frac{1}{25}$
- J**  $\frac{1}{5}$

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	Data
<b>Concept</b>	Compound Events
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**





**TEKS 7.6I Readiness Standard**  
determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces

**ITEM**

**53** On Roberto's shelf are:

- 6 mystery books
- 5 science books
- 4 history books
- 3 adventure books

Roberto will randomly choose 1 book to read. What is the probability that he will choose an adventure book?

- A**  $\frac{1}{3}$
- B**  $\frac{1}{18}$
- C**  $\frac{1}{5}$
- D**  $\frac{1}{6}$

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	Data
<b>Concept</b>	Simple Event
<b>Process TEKS</b>	7.1A, 7.1B, 7.1F

**Notes**



**TEKS**

**ITEM**

**Item Analysis**

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

**Notes**



**TEKS 7.3A Supporting Standard**  
add, subtract, multiply, and divide rational numbers fluently

**ITEM**

**25** The diameter of the handle of a softball bat is  $1\frac{3}{4}$  inches.  
What is the length in inches of the diameters of 8 of these bat handles?

- A** 6 in.
- B**  $8\frac{3}{4}$  in.
- C**  $9\frac{3}{4}$  in.
- D** 14 in.

**Item Analysis**

<b>Verb</b>	Multiply
<b>Using or Including</b>	NA
<b>Concept</b>	Rational Numbers
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.3B Readiness Standard**  
apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers

**ITEM**

**8** Ms. Blankenship had \$80 to purchase school supplies for her class. She bought 32 glue sticks and 32 boxes of crayons. Each glue stick cost \$1.40, and each box of crayons cost \$0.59.  
How much money did Ms. Blankenship have left after these purchases?

- F** \$16.32
- G** \$18.88
- H** \$63.68
- J** \$35.20

**Item Analysis**

<b>Verb</b>	Apply Solve
<b>Using or Including</b>	NA
<b>Concept</b>	Rational Number Operations
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.3B Readiness Standard**

apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers

**ITEM**

**21** A music club has 15 members. Each member pays monthly dues of \$14.60. On the first day of the month, 8 members paid their dues. The remaining members paid their dues on the second day of the month. How much money was collected in dues on the second day of the month?

- A** \$335.80
- B** \$102.20
- C** \$116.80
- D** \$219.00

**Item Analysis**

<b>Verb</b>	Apply Solve
<b>Using or Including</b>	NA
<b>Concept</b>	Rational Number Operations
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.3B Readiness Standard**

apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers

**ITEM**

**37** There are 40 houses in a neighborhood.

- Company X provides electricity to  $\frac{1}{8}$  of the houses
- Company Y provides electricity to  $\frac{2}{5}$  of the houses
- Company Z provides electricity to the remaining houses.

In this neighborhood, Company Z provides electricity to —

- A** 21 houses
- B** 24 houses
- C** 16 houses
- D** 19 houses

**Item Analysis**

<b>Verb</b>	Apply Solve
<b>Using or Including</b>	NA
<b>Concept</b>	Rational Number Operations
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.4A Readiness Standard**

represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including  $d = rt$

**ITEM**

**11** A dolphin travels through the water at a speed of 25 kilometers per hour. Which representation shows the distance a dolphin can travel at this rate?

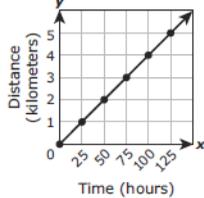
Distance Traveled by a Dolphin

Time (hours)	Distance (kilometers)
0	0
2	50
4	100
6	150
8	200

**A**

**B**  $y = x + 25$ , where  $x$  represents the time in hours and  $y$  represents the distance in kilometers

Distance Traveled by a Dolphin



**C**

**D** In 5 hours a dolphin can travel a distance of 135 kilometers.

**Item Analysis**

**Verb**

Represent

**Using or Including**

Multiple Representations

**Concept**

Constant Rate of Change

**Process TEKS**

7.1A, 7.1B, 7.1D, 7.1F

**Notes**



**TEKS 7.4A Readiness Standard**

represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including  $d = rt$

**ITEM**

**34** Caroline's cell phone plan costs \$32 per month. Which table shows the sum of the amounts that Caroline will pay for her cell phone plan over the next 4 months?

Caroline's Cell Phone Plan

Month	1	2	3	4
Total Amount Paid	\$0	\$32	\$64	\$96

**F**

Caroline's Cell Phone Plan

Month	1	2	3	4
Total Amount Paid	\$8	\$16	\$24	\$32

**G**

Caroline's Cell Phone Plan

Month	1	2	3	4
Total Amount Paid	\$32	\$36	\$40	\$44

**H**

Caroline's Cell Phone Plan

Month	1	2	3	4
Total Amount Paid	\$32	\$64	\$96	\$128

**J**

**Item Analysis**

**Verb**

Represent

**Using or Including**

Tables

**Concept**

Constant Rate of Change

**Process TEKS**

7.1A, 7.1B, 7.1D, 7.1F

**Notes**

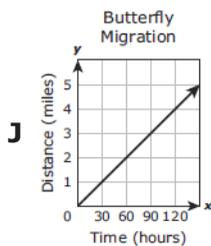
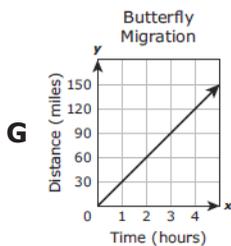
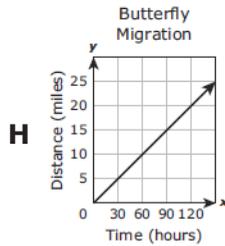
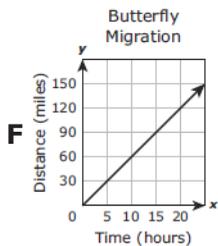


**TEKS 7.4A Readiness Standard**

represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including  $d = rt$

**ITEM**

**54** During migration, a butterfly can travel 30 miles in 1 hour. Which graph best represents  $y$ , the number of miles a butterfly can travel in  $x$  hours?



**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Graphs
<b>Concept</b>	Constant Rate of Change
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1D, 7.1F</b>

**Notes**



**TEKS 7.4B Supporting Standard**

calculate unit rates from rates in mathematical and real-world problems

**ITEM**

**1** Tareq pays \$22.10 for 2.6 pounds of salmon. What is the price per pound of the salmon?

- A** \$57.46
- B** \$8.50
- C** \$19.50
- D** \$24.70

**Item Analysis**

<b>Verb</b>	Calculate
<b>Using or Including</b>	Real-World
<b>Concept</b>	Unit Rates
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.4D Readiness Standard**

solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems

**ITEM**

**15** Yvette uses 6 grams of tea leaves to make 24 fluid ounces of tea. Last week she made 288 fluid ounces of tea. How many grams of tea leaves did Yvette use to make tea last week?

- A 0.5 g
- B 1,152 g
- C 72 g
- D 2g

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	NA
<b>Concept</b>	Ratios
<b>Process TEKS</b>	7.1A, 7.1B, 7.1F

**Notes**



**TEKS 7.4D Readiness Standard**

solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems

**ITEM**

**30** A boat traveled 27 miles in 2 hours. At this rate, how many miles will the boat travel in  $\frac{1}{2}$  hour?

- F  $13\frac{1}{2}$  mi
- G  $6\frac{3}{4}$  mi
- H  $3\frac{3}{8}$  mi
- J  $24\frac{1}{2}$  mi

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	
<b>Concept</b>	Rates
<b>Process TEKS</b>	7.1A, 7.1B, 7.1F

**Notes**



**TEKS 7.4D Readiness Standard**

solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems

**ITEM**

**48** The price of a television was reduced from \$250 to \$200. By what percentage was the price of the television reduced?

- F** 20%
- G** 25%
- H** 80%
- J** 50%

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Financial Literacy
<b>Concept</b>	Percents
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**

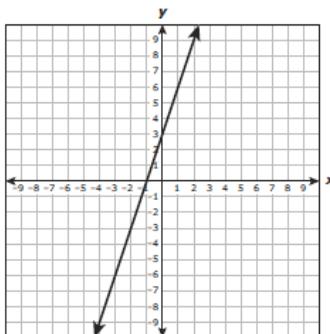


**TEKS 7.7A Readiness Standard**

represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form  $y = mx + b$

**ITEM**

**27** Which equation best represents the relationship between  $x$  and  $y$  in the graph?



- A**  $y = 3x + 3$
- B**  $y = 3x - 1$
- C**  $y = \frac{1}{3}x + 3$
- D**  $y = \frac{1}{3}x - 1$

**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Graphs
<b>Concept</b>	Linear Relationships
<b>Process TEKS</b>	<b>7.1B, 7.1C, 7.1D, 7.1F</b>

**Notes**



**TEKS 7.7A Readiness Standard**

represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form  $y = mx + b$

**ITEM**

**41** A store sells new video games for \$55 each. Used video games sell for \$12 each. Jacob is buying 3 new video games and  $x$  used video games. Which equation can be used to find  $y$ , the total price Jacob must pay in dollars?

- A**  $y = 12x + 55$
- B**  $y = 12x + 165$
- C**  $y = 55x + 12$
- D**  $y = 165x + 12$

**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Equations
<b>Concept</b>	Linear Relationships
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1D, 7.1F</b>

**Notes**



**TEKS 7.7A Readiness Standard**

represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form  $y = mx + b$

**ITEM**

**47** Which table contains only values that satisfy the equation  $y = 0.5x + 14$  ?

**A**

x	y
0	0
5	35
10	70
15	105
20	140

**C**

x	y
0	14
5	16.5
10	19
15	21.5
20	24

**B**

x	y
0	14
5	39
10	64
15	89
20	114

**D**

x	y
0	14
5	14.5
10	15
15	15.5
20	16

**Item Analysis**

<b>Verb</b>	Represent
<b>Using or Including</b>	Tables
<b>Concept</b>	Linear Relationships
<b>Process TEKS</b>	<b>7.1B, 7.D, 7.1F</b>

**Notes**



**TEKS 7.10A Supporting Standard**

write one-variable, two-step equations and inequalities to represent constraints or conditions within problems

**ITEM**

**50** Jeff bought a bottle of water for \$2. He also bought some hot dogs for \$3 each. Jeff did not spend more than \$14 on the hot dogs and the bottle of water. Which inequality can be used to find  $h$ , the number of hot dogs that Jeff could have bought?

- F**  $3h - 2 \leq 14$
- G**  $3h + 2 \leq 14$
- H**  $3h - 2 \geq 14$
- J**  $3h + 2 \geq 14$

**Item Analysis**

<b>Verb</b>	Write
<b>Using or Including</b>	NA
<b>Concept</b>	One Variable, Two Step Equation
<b>Process TEKS</b>	7.1A, 7.1B, 7.1D, 7.1F

**Notes**



**TEKS 7.10C Supporting Standard**

write a corresponding real-world problem given a one-variable, two-step equation or inequality

**ITEM**

**13** Which situation is best represented by the following equation?  
 $45w + 123.95 = 753.95$

- A** Erica paid \$753.95 for dance classes. She paid a \$123.95 registration fee and \$45 for each week she was enrolled in the classes. What is  $w$ , the number of weeks Erica was enrolled in dance classes?
- B** Erica paid \$753.95 for dance classes. She paid a \$45 registration fee and \$123.95 for each week she was enrolled in the classes. What is  $w$ , the number of weeks Erica was enrolled in dance classes?
- C** Erica and her sister paid \$753.95 for dance classes. Erica paid \$123.95 for each week she was enrolled in the classes, and her sister paid \$45 for each week she was enrolled in the classes. What is  $w$ , the number of weeks Erica and her sister were enrolled in dance classes?
- D** Erica paid \$753.95 for dance classes. She paid \$123.95 for each week she was enrolled in the classes after using a coupon that gave her \$45 off the price per week. What is  $w$ , the number of weeks Erica was enrolled in dance classes?

**Item Analysis**

<b>Verb</b>	Write
<b>Using or Including</b>	NA
<b>Concept</b>	Real-World Problem for an Equation
<b>Process TEKS</b>	7.1A, 7.1B, 7.1D, 7.1G

**Notes**



**TEKS 7.11A Readiness Standard**  
model and solve one-variable, two-step equations and inequalities

**ITEM**

**4** An equation is modeled.

$$x + x + x + x + x + 1 + 1 + 1 = 1$$

What value of  $x$  makes the equation true?

- F** 1
- G** 7
- H** 5
- J** 1

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	NA
<b>Concept</b>	One Variable, Two Step Equation
<b>Process TEKS</b>	<b>7.1B, 7.1E, 7.1F</b>

**Notes**



**TEKS 7.11A Readiness Standard**  
model and solve one-variable, two-step equations and inequalities

**ITEM**

**20** Walter and Brian each have a CD collection.

- The number of CDs in Walter’s collection can be represented by  $x$ .
- The number of CDs in Brian’s collection is 3 times the number in Walter’s collection.
- The total number of CDs in both collections is 144.

What is  $x$ , the number of CDs in Walter’s collection?

- F** 108
- G** 48
- H** 72
- J** 36

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	NA
<b>Concept</b>	One Variable, Two Step Equations
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.11A Readiness Standard**  
model and solve one-variable, two-step equations and inequalities

**ITEM**

**44** What is the value of  $x$  in this equation?

$$2x + 2 = -52$$

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>	One Variable, Two Step Equation
<b>Process TEKS</b>	<b>7.1B, 7.1F</b>

**Notes**



**TEKS 7.11B Supporting Standard**  
determine if the given value(s) make(s) one-variable, two-step equations and inequalities true

**ITEM**

**23** If  $x = -6$ , which inequality is true?

- A**  $-5 - 3x > 10$
- B**  $-3 - 5x < -14$
- C**  $1 - 2x > 13$
- D**  $2 - x < -3$

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	NA
<b>Concept</b>	One Variable, Two Step Inequality
<b>Process TEKS</b>	<b>7.1B, 7.1F</b>

**Notes**



**TEKS 7.4E Supporting Standard**

convert between measurement systems, including the use of proportions and the use of unit rates

**ITEM**

**24** Chloe is 5 feet 4 inches tall. There are 2.54 centimeters in 1 inch. What is Chloe's height in centimeters?

- F** 56.54 cm
- G** 13.72 cm
- H** 162.56 cm
- J** 152.40 cm

**Item Analysis**

<b>Verb</b>	Convert
<b>Using or Including</b>	Proportions Unit Rates
<b>Concept</b>	Between Measurement Systems
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**

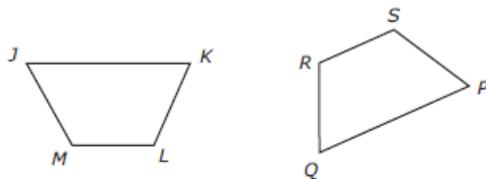


**TEKS 7.5A Supporting Standard**

generalize the critical attributes of similarity, including ratios within and between similar shapes

**ITEM**

**2** Figure JKLM is similar to figure PQRS.



Which proportion must be true for these figures?

- F**  $\frac{QR}{QP} = \frac{JK}{LM}$
- G**  $\frac{QR}{KL} = \frac{RS}{JK}$
- H**  $\frac{QR}{MJ} = \frac{PQ}{LM}$
- J**  $\frac{QR}{KL} = \frac{PS}{JM}$

**Item Analysis**

<b>Verb</b>	Generalize
<b>Using or Including</b>	Ratios within Similar Figures
<b>Concept</b>	Critical Attributes of Similar Figures
<b>Process TEKS</b>	<b>7.1B, 7.1E, 7.1F</b>

**Notes**



**TEKS 7.5C Readiness Standard**  
solve mathematical and real-world problems involving similar shape and scale drawings

**ITEM**

**18** Corbin made a scale model of the San Jacinto Monument. The monument has an actual height of 604 feet. Corbin's model used a scale in which 1 inch represents 100 feet. What is the height in inches of Corbin's model?

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>	Scale Model
<b>Concept</b>	Real-World Problems
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

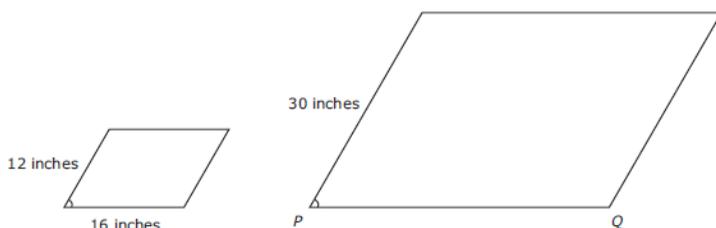
**Notes**



**TEKS 7.5C Readiness Standard**  
solve mathematical and real-world problems involving similar shape and scale drawings

**ITEM**

**42** The two parallelograms below are similar.



What is the length in inches of PQ?

- F** 40 in.
- G** 34 in.
- H** 38 in.
- J** 14 in.

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Similar Shapes
<b>Concept</b>	Mathematical Problems
<b>Process TEKS</b>	<b>7.1B, 7.1E, 7.1F</b>

**Notes**



**TEKS 7.5C Readiness Standard**  
solve mathematical and real-world problems involving similar shape and scale drawings

**ITEM**

**49** Ana drew a map of the Panama Canal. In the scale Ana used for the map, 4 centimeters represents 20 kilometers. The actual length of the Panama Canal is 82 kilometers. What is the length in centimeters of the Panama Canal on Ana's map?

- A 410 cm
- B 15.5 cm
- C 16.4 cm
- D 162 cm

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Scale Drawing
<b>Concept</b>	Real-World Problems
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

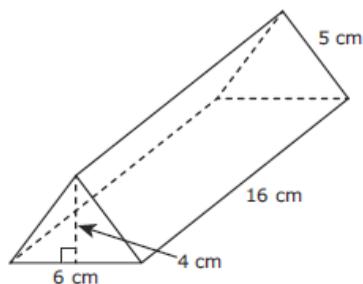
**Notes**



**TEKS 7.9A Readiness Standard**  
solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids

**ITEM**

**14** The dimensions of a triangular prism are shown in the diagram.



What is the volume of the triangular prism in cubic centimeters?

- F 480 cm<sup>3</sup>
- G 192 cm<sup>3</sup>
- H 240 cm<sup>3</sup>
- J 384 cm<sup>3</sup>

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Triangular Prism
<b>Concept</b>	Volume
<b>Process TEKS</b>	<b>7.1B, 7.1C, 7.1E, 7.1F</b>

**Notes**

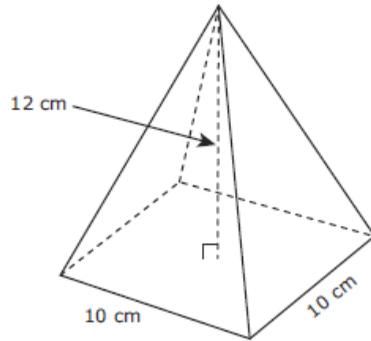


**TEKS 7.9A Readiness Standard**

solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids

**ITEM**

**31** Alina drew a model of a square pyramid. The dimensions of the model are shown in the diagram.



What is the volume of Alina's model in cubic centimeters?

- A 400 cm<sup>3</sup>
- B 1,200 cm<sup>3</sup>
- C 600 cm<sup>3</sup>
- D 160 cm<sup>3</sup>

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Rectangular Pyramid
<b>Concept</b>	Volume
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1E, 7.1F

**Notes**



**TEKS 7.9A Readiness Standard**

solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids

**ITEM**

**39** A storage container is shaped like a rectangular prism. The volume of the container is 1,360 cubic feet. The area of the base of the container is 160 square feet. What is the height of the container in feet?

- A 17 ft
- B 34 ft
- C 8.5 ft
- D Not here

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Rectangular Prism
<b>Concept</b>	Volume (Finding Height)
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1F

**Notes**



**TEKS 7.9B Readiness Standard**  
determine the circumference and area of circles

**ITEM**

- 9** A group of students stood in a circle to play a game. The circle had a diameter of 22 meters. Which measurement is closest to the circumference of the circle in meters?
- A** 34.54 m
  - B** 1,519.76 m
  - C** 379.94 m
  - D** 69.08 m

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	NA
<b>Concept</b>	Circumference of a Circle
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1F

**Notes**



**TEKS 7.9B Readiness Standard**  
determine the circumference and area of circles

**ITEM**

- 33** A circular railroad-crossing sign has a diameter of 30 inches.



Which measurement is closest to the area of the sign in square inches?

- A** 94.2 in.<sup>2</sup>
- B** 188.4 in.<sup>2</sup>
- C** 706.5 in.<sup>2</sup>
- D** 286.6 in.<sup>2</sup>

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	NA
<b>Concept</b>	Area of a Circle
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1E, 7.1F

**Notes**



**TEKS 7.9B Readiness Standard**  
determine the circumference and area of circles

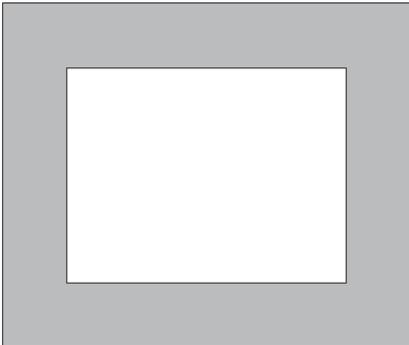
**ITEM**  
**46** Jennifer painted a tabletop that is shaped like a circle. The circumference of the tabletop is  $6\pi$  feet. Which measurement is closest to the area of the tabletop in square feet?

**F** 18.84 ft<sup>2</sup>  
**G** 28.26 ft<sup>2</sup>  
**H** 37.68 ft<sup>2</sup>  
**J** 113.04 ft<sup>2</sup>

Item Analysis	
<b>Verb</b>	Determine
<b>Using or Including</b>	NA
<b>Concept</b>	Area (From Circumference)
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1F
<b>Notes</b>	
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**TEKS 7.9C Readiness Standard**  
determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles

**ITEM**  
**16** Two rectangles were used to form the following figure. Use the ruler provided to measure the dimensions of the figure to the nearest quarter of an inch.



Which measurement is closest to the area of the shaded region of this figure in square inches?

**F** 19 in.<sup>2</sup>  
**G** 11 in.<sup>2</sup>  
**H** 6 in.<sup>2</sup>  
**J** 8 in.<sup>2</sup>

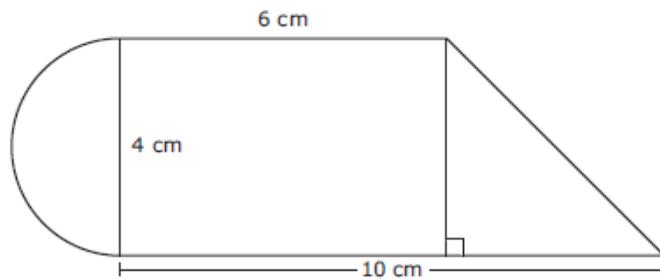
Item Analysis	
<b>Verb</b>	Determine
<b>Using or Including</b>	Rectangles
<b>Concept</b>	Area of Composite Figures
<b>Process TEKS</b>	7.1B, 7.1C, 7.1E, 7.1F
<b>Notes</b>	
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**TEKS 7.9C Readiness Standard**

determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles

**ITEM**

**35** Landon used a semicircle, a rectangle, and a right triangle to form the figure shown.



Which is the best estimate of the area of the figure in square centimeters?

- A 52 cm<sup>2</sup>
- B 44 cm<sup>2</sup>
- C 26 cm<sup>2</sup>
- D 38 cm<sup>2</sup>

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	Rectangle, Triangle, Semicircles
<b>Concept</b>	Area of Composite Figures
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1E, 7.1F

**Notes**

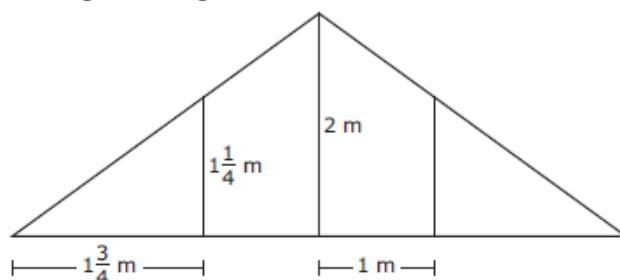


**TEKS 7.9C Readiness Standard**

determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles

**ITEM**

**52** An advertising banner has four sections, as modeled below. Two sections are congruent trapezoids, and two sections are congruent right triangles.



Which measurement is the best estimate of the area of the banner in square meters?

- F 6 m<sup>2</sup>
- G 15 m<sup>2</sup>
- H 8 m<sup>2</sup>
- J 10 m<sup>2</sup>

**Item Analysis**

<b>Verb</b>	Determine
<b>Using or Including</b>	Triangles and Trapezoids
<b>Concept</b>	Area of Composite Figures
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1E, 7.1F

**Notes**

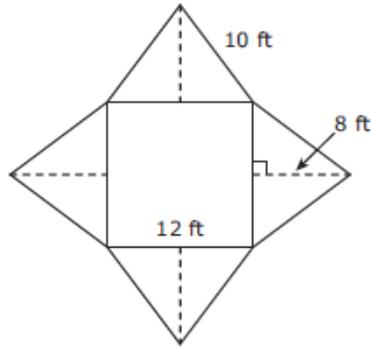


**TEKS 7.9D Supporting Standard**

solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net

**ITEM**

**6** The net of a square pyramid and its dimensions are shown in the diagram.



What is the total surface area of the pyramid in square feet?

- F** 336 ft<sup>2</sup>
- G** 960 ft<sup>2</sup>
- H** 204 ft<sup>2</sup>
- J** 624 ft<sup>2</sup>

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Rectangular Prism
<b>Concept</b>	Total Surface Area
<b>Process TEKS</b>	7.1B, 7.1C, 7.1E, 7.1F

**Notes**



**TEKS 7.11C Supporting Standard**

write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships

**ITEM**

**19** An isosceles triangle has base angles that each measure 42°. Which equation can be used to find  $z$ , the measure of the third angle of this isosceles triangle in degrees?

- A**  $84 + 2z = 180$
- B**  $84 + z = 180$
- C**  $42 + 2z = 180$
- D**  $42 + z = 180$

**Item Analysis**

<b>Verb</b>	Write
<b>Using or Including</b>	Sum of the Angles in a Triangle
<b>Concept</b>	Equation
<b>Process TEKS</b>	7.1B, 7.1F

**Notes**

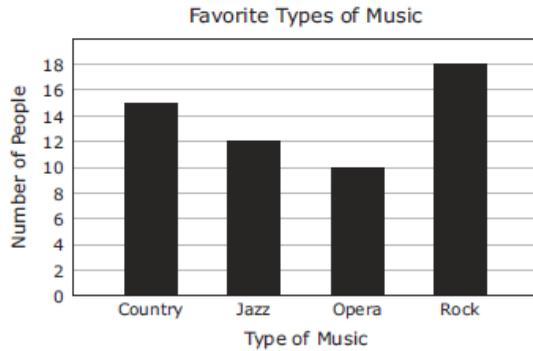


**TEKS 7.6G Readiness Standard**

solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents

**ITEM**

**5** Maribel surveyed 55 people to find out their favorite types of music. The results are shown in the bar graph.



Based on the information in the graph, which types of music were chosen by 40% of the people surveyed?

- A Country and opera
- B Jazz and opera
- C Jazz, opera, and rock
- D Country, jazz, and rock

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Part to Whole
<b>Concept</b>	Data in a Bar Graph
<b>Process TEKS</b>	7.1A, 7.1B, 7.1E, 7.1F

**Notes**

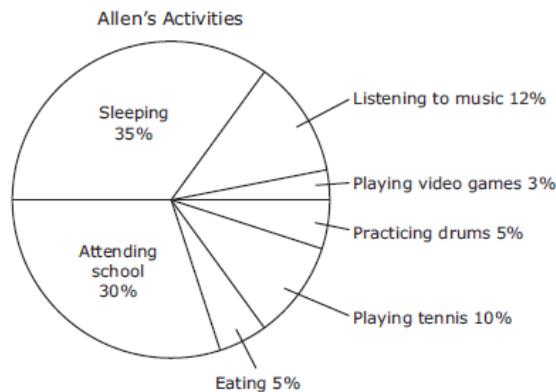


**TEKS 7.6G Readiness Standard**

solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents

**ITEM**

**36** The circle graph shows Allen's activities during 24 hours.



How much more time in hours did Allen spend listening to music than playing tennis?

- F 2.88 hours
- G 0.48 hour
- H 2.40 hours
- J 0.12 hour

**Item Analysis**

<b>Verb</b>	Solve
<b>Using or Including</b>	Part to Part
<b>Concept</b>	Data in a Circle Graph
<b>Process TEKS</b>	7.1A, 7.1B, 7.1E, 7.1F

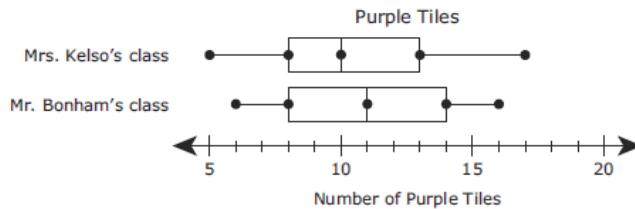
**Notes**



**TEKS 7.12A Readiness Standard**

compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads

- 17** Mrs. Kelso and Mr. Bonham gave each of their students a small bag of colored tiles. The students each counted the number of purple tiles they received. The box plots display the data for both classes.



Which statement is best supported by the information in the box plots?

- A** The range of the data for Mr. Bonham's class is less than the range of the data for Mrs. Kelso's class.
- B** The data for Mrs. Kelso's class are more symmetrical than the data for Mr. Bonham's class.
- C** The median number of the data for Mr. Bonham's class is less than the median number of the data for Mrs. Kelso's class.
- D** The interquartile range of the data for Mrs. Kelso's class is greater than the interquartile range of the data for Mr.

**Item Analysis**

<b>Verb</b>	Compare
<b>Using or Including</b>	Box Plots
<b>Concept</b>	Shapes, Centers, and Spreads
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1E, 7.1G</b>

**Notes**

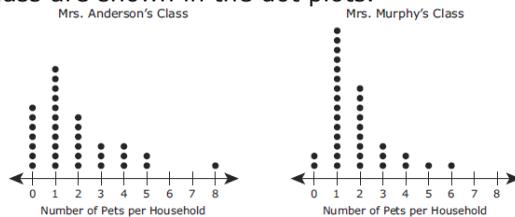


**TEKS 7.12A Readiness Standard**

compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads

**ITEM**

- 51** The number of pets per household for Mrs. Anderson's class and Mrs. Murphy's class are shown in the dot plots.



Here are three statements about the number of pets per household for these two classes.

- I. The range of the number of pets per household for Mrs. Murphy's class is greater than the range of the number of pets per household for Mrs. Anderson's class.
- II. The distribution of the data is approximately symmetrical in both sets of data.
- III. The mode of the number of pets per household for Mrs. Anderson's class is equal to the mode of the number of pets per household for Mrs. Murphy's class.

Which of these three statements appear to be true?

- A** I only
- B** I and III
- C** II and III
- D** III only

**Item Analysis**

<b>Verb</b>	Compare
<b>Using or Including</b>	Dot Plots
<b>Concept</b>	Shapes, Centers, and Spreads
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1E, 7.1F</b>

**Notes**



**TEKS 7.13A Supporting Standard**

calculate the sales tax for a given purchase and calculate income tax for earned wages

**ITEM**

**38** A refrigerator is priced at \$525.50. There is a 6% sales tax rate. What is the sales tax for the refrigerator in dollars and cents?

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>	Calculate
<b>Using or Including</b>	NA
<b>Concept</b>	Sales Tax
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1F</b>

**Notes**



**TEKS 7.13B Supporting Standard**

identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; taxes; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget

**ITEM**

**43** Felicia earns \$800 a month. The table shows her monthly budget.

Monthly Budget

Expense	Amount of Money
College savings	\$200
Car payment	\$275
Cell phone	\$125
Clothes	\$50
Food	\$100
Other	\$50

Which statement is supported by the information in the table?

- A** Felicia spends 10% of her monthly budget on clothes and food.
- B** Felicia spends 25% of her monthly budget on her car payment.
- C** Felicia spends 20% of her monthly budget on college savings.
- D** Felicia spends 50% of her monthly budget on her car payment and cell phone.

**Item Analysis**

<b>Verb</b>	Identify
<b>Using or Including</b>	Savings for College, and Expenses
<b>Concept</b>	Percent of Total Budget
<b>Process TEKS</b>	<b>7.1A, 7.1B, 7.1E, 7.1G</b>

**Notes**



**TEKS 7.13C Supporting Standard**

create and organize a financial assets and liabilities record and construct a net worth statement

**ITEM**

**28** Emily created the net worth statement shown.

Net Worth Statement

Assets	
Checking account	\$750
Automobile (current value)	\$8,950
House (current value)	\$92,500
Savings account	\$1,350
Investments	\$4,000
<b>Total Assets</b>	<b>\$107,550</b>
Liabilities	
Credit card debt	\$3,800
Student loans	\$15,750
Personal loans	\$975
<b>Total Liabilities</b>	<b>\$20,525</b>

Based on the information in the table, what is Emily's net worth?

- F \$107,550
- G \$87,025
- H \$20,525
- J \$128,075

**Item Analysis**

<b>Verb</b>	Construct
<b>Using or Including</b>	NA
<b>Concept</b>	Net Worth Statement
<b>Process TEKS</b>	7.1A, 7.1B, 7.1E, 7.1F

**Notes**



**TEKS 7.13E Supporting Standard**

calculate and compare simple interest and compound interest earnings

**ITEM**

**7** Rita has a loan of \$45,580. This loan has a simple interest rate of 4% per year. What is the amount of interest that Rita will be charged on this loan at the end of one year?

- A \$47,403.20
- B \$11,395
- C \$18,232
- D \$1,823.20

**Item Analysis**

<b>Verb</b>	Calculate
<b>Using or Including</b>	NA
<b>Concept</b>	Simple Interest
<b>Process TEKS</b>	7.1A, 7.1B, 7.1C, 7.1F

**Notes**





**TEKS 7.13F Supporting Standard**  
analyze and compare monetary incentives, including sales, rebates, and coupons

**ITEM**  
**12** Leo wants to buy some shoes. He found the shoes at three different stores for a price of \$35. The stores are each having a sale.

- Store X is offering 15% off the price of the shoes.
- Store Y is offering \$5 off the price of the shoes.
- Store Z is offering a discount off the price of the shoes.

Which statement about the sale price of these shoes is true?

**F** Store X has the best sale price of \$20.  
**G** Store Z has the best sale price of \$28.  
**H** Store Y has the best sale price of \$30.  
**J** Store Z has the best sale price of \$7.

Item Analysis	
Verb	Compare
Using or Including	Sales
Concept	Monetary Incentives
Process TEKS	7.1A, 7.1B, 7.1G
Notes	
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**TEKS**

**ITEM**

Item Analysis	
Verb	
Using or Including	
Concept	
Process TEKS	
Notes	
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**Category 1**  
**Probability and Numerical Representations**  
**9 Total Questions**

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
<b>7.2A</b> extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers	<b>29</b>	<b>C</b>	<b>7.1B, 7.1E, 7.1F</b>
<b>7.6A</b> represent sample spaces for simple and compound events using lists and tree diagrams	<b>3</b>	<b>A</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.6C</b> make predictions and determine solutions using experimental data for simple and compound events	<b>32</b>	<b>490</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.6D</b> make predictions and determine solutions using theoretical probability for simple and compound events	<b>26</b>	<b>J</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.6E</b> find the probabilities of a simple event and its complement and describe the relationship between the two	<b>40</b>	<b>J</b>	<b>7.1B, 7.1C, 7.1E, 7.1F</b>
<b>7.6H</b> solve problems using qualitative and quantitative predictions and comparisons from simple experiments	<b>22</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1G</b>
	<b>45</b>	<b>C</b>	<b>7.1A, 7.1B, 7.1E, 7.1G</b>
<b>7.6I</b> determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces	<b>10</b>	<b>H</b>	<b>7.1A, 7.1B, 7.1F</b>
	<b>53</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1F</b>

Shaded - Readiness TEKS, NT - Not Tested  
 Readiness TEKS - 4/9 questions

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

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
<b>7.3A</b> add, subtract, multiply, and divide rational numbers fluently	<b>25</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.3B</b> apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers	<b>8</b>	<b>F</b>	<b>7.1A, 7.1B, 7.1F</b>
	<b>21</b>	<b>B</b>	<b>7.1A, 7.1B, 7.1F</b>
	<b>37</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.4A</b> represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$	<b>11</b>	<b>A</b>	<b>7.1A, 7.1B, 7.1D, 7.1F</b>
	<b>34</b>	<b>J</b>	<b>7.1A, 7.1B, 7.1D, 7.1F</b>
	<b>54</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1D, 7.1F</b>
<b>7.4B</b> calculate unit rates from rates in mathematical and real-world problems	<b>1</b>	<b>B</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.4C</b> determine the constant of proportionality ( $k = y/x$ ) within mathematical and real-world problems	<b>NT</b>		
<b>7.4D</b> solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems	<b>15</b>	<b>C</b>	<b>7.1A, 7.1B, 7.1F</b>
	<b>30</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1F</b>
	<b>48</b>	<b>F</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.7A</b> represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$	<b>27</b>	<b>A</b>	<b>7.1B, 7.1C, 7.1D, 7.1F</b>
	<b>41</b>	<b>B</b>	<b>7.1A, 7.1B, 7.1D, 7.1F</b>
	<b>47</b>	<b>C</b>	<b>7.1B, 7.1D, 7.1F</b>
<b>7.10A</b> write one-variable, two-step equations and inequalities to represent constraints or conditions within problems	<b>50</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1D, 7.1F</b>
<b>7.10B</b> represent solutions for one-variable, two-step equations and inequalities on number lines	<b>NT</b>		
<b>7.10C</b> write a corresponding real-world problem given a one-variable, two-step equation or inequality	<b>13</b>	<b>A</b>	<b>7.1A, 7.1B, 7.1D, 7.1G</b>
<b>7.11A</b> model and solve one-variable, two-step equations and inequalities	<b>4</b>	<b>J</b>	<b>7.1B, 7.1E, 7.1F</b>
	<b>20</b>	<b>J</b>	<b>7.1A, 7.1B, 7.1F</b>
	<b>44</b>	<b>-27</b>	<b>7.1B, 7.1F</b>
<b>7.11B</b> determine if the given value(s) make(s) one-variable, two-step equations and inequalities true	<b>23</b>	<b>A</b>	<b>7.1B, 7.1F</b>

Shaded - Readiness TEKS, NT - Not Tested  
 Readiness TEKS - 15/20 questions

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

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
<b>7.4E</b> convert between measurement systems, including the use of proportions and the use of unit rates	<b>24</b>	<b>H</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.5A</b> generalize the critical attributes of similarity, including ratios within and between similar shapes	<b>2</b>	<b>J</b>	<b>7.1B, 7.1E, 7.1F</b>
<b>7.5B</b> describe $\pi$ as the ratio of the circumference of a circle to its diameter	<b>NT</b>		
<b>7.5C</b> solve mathematical and real-world problems involving similar shape and scale drawings	<b>18</b>	<b>6.04</b>	<b>7.1A, 7.1B, 7.1F</b>
	<b>42</b>	<b>F</b>	<b>7.1B, 7.1E, 7.1F</b>
	<b>49</b>	<b>C</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.9A</b> solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids	<b>14</b>	<b>G</b>	<b>7.1B, 7.1C, 7.1E, 7.1F</b>
	<b>31</b>	<b>A</b>	<b>7.1A, 7.1B, 7.1C, 7.1E, 7.1F</b>
	<b>39</b>	<b>C</b>	<b>7.1A, 7.1B, 7.1C, 7.1F</b>
<b>7.9B</b> determine the circumference and area of circles	<b>9</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1C, 7.1F</b>
	<b>33</b>	<b>C</b>	<b>7.1A, 7.1B, 7.1C, 7.1E, 7.1F</b>
	<b>46</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1E, 7.1F</b>
<b>7.9C</b> determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles	<b>16</b>	<b>G</b>	<b>7.1B, 7.1C, 7.1E, 7.1F</b>
	<b>35</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1C, 7.1E, 7.1F</b>
	<b>52</b>	<b>F</b>	<b>7.1A, 7.1B, 7.1C, 7.1E, 7.1F</b>
<b>7.9D</b> solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net	<b>6</b>	<b>F</b>	<b>7.1B, 7.1C, 7.1E, 7.1F</b>
<b>7.11C</b> write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships	<b>19</b>	<b>B</b>	<b>7.1B, 7.1F</b>

Shaded - Readiness TEKS, NT - Not Tested  
 Readiness TEKS - 12/16 questions

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

<b>TEKS</b>	<b>Item</b>	<b>Correct Answer</b>	<b>Process TEKS</b>
<b>7.6G</b> solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents	<b>5</b>	<b>B</b>	<b>7.1A, 7.1B, 7.1E, 7.1F</b>
	<b>36</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1E, 7.1F</b>
<b>7.12A</b> compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads	<b>17</b>	<b>A</b>	<b>7.1A, 7.1B, 7.1E, 7.1G</b>
	<b>51</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1E, 7.1F</b>
<b>7.12B</b> use data from a random sample to make inferences about a population	<b>NT</b>		
<b>7.12C</b> compare two populations based on data in random samples from these populations, including informal comparative inferences about differences between the two populations	<b>NT</b>		
<b>7.13A</b> calculate the sales tax for a given purchase and calculate income tax for earned wages	<b>38</b>	<b>31.53</b>	<b>7.1A, 7.1B, 7.1F</b>
<b>7.13B</b> identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; taxes; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget	<b>43</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1E, 7.1G</b>
<b>7.13C</b> create and organize a financial assets and liabilities record and construct a net worth statement	<b>28</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1E, 7.1F</b>
<b>7.13D</b> use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student's city or another large city nearby	<b>NT</b>		
<b>7.13E</b> calculate and compare simple interest and compound interest earnings	<b>7</b>	<b>D</b>	<b>7.1A, 7.1B, 7.1C, 7.1F</b>
<b>7.13F</b> analyze and compare monetary incentives, including sales, rebates, and coupons	<b>12</b>	<b>G</b>	<b>7.1A, 7.1B, 7.1G</b>

Shaded - Readiness TEKS, NT - Not Tested  
 Readiness TEKS - 4/9 questions