THIRD SPACE LEARNING

Mock STAAR 6th Grade Assessment

Texas Practice Test Grade 6

Grade 6

Questions

Name: ..... Class: .....

Date: ..... Score: .....

1 If the ratio of boys to girls in a 6th grade math class is 2:5. If there are 8 boys, how many girls are there?

A. 25 girls
B. 28 girls
C. 20 girls
D. 15 girls

2 The table shows the average annual salary for four jobs.

Average Annual Salaries	
Job	Average Annual Salary
Automotive mechanic	$55,800
Staff accountant	$64,900
Warehouse manager	$71,500
Electrician	$53,600

Based on the information in the table, how much more will a warehouse manager make than a staff accountant over 20 years?

A. $132,000
B. $1,298,000
C. $715,000
D. $1,430,000

3 The stem and leaf plot shows the times of a 50m run by runners in the first heat.

Stem	Leaf
13	9
14	4 4 4 4
15	0 1 3 5
16	5 9

14 | 4 means 14.4 seconds

Which statement is supported by the data in the stem and leaf plot?

A. Half of the athletes ran the 50m in less than 15 seconds.
B. More runners finished the race in under 14 seconds then over 16 seconds.
C. There were 11 runners in the race.
D. There were more runners that finished between 15 and 17 seconds then between 13 and 15 seconds.

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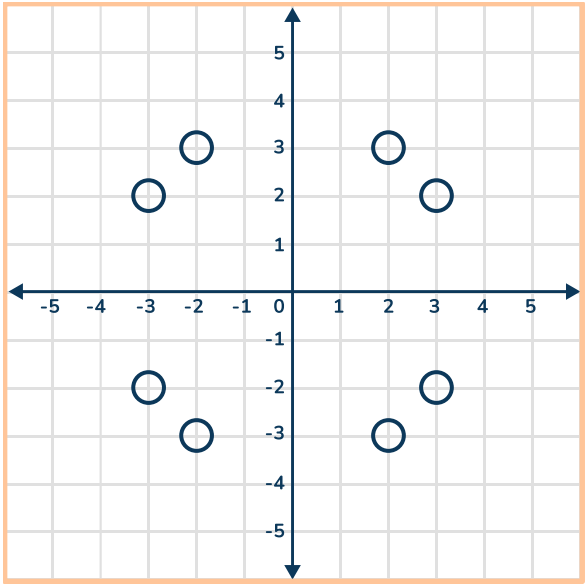
4 What are the locations of the points (3,2) and (-2,-3) on the coordinate grid?

Shade the TWO correct circles that represent the points.



5 What value of x makes this equation true?

$$120 = 150 + x$$

A. 30
B. 270
C. -30
D. -270

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6 The table shows the amount of time four brothers spent completing their chores on a Saturday.

Chores	
Child Name	**Time (hours)**
Dustin	$2\frac{1}{4}$
Brent	$2\frac{2}{3}$
Paul Marc	$2\frac{7}{10}$
Caleb	$2\frac{5}{9}$

Which list shows the names of the brothers in order from greatest amount of time spent on chores to the least amount of time spent on chores?

A. Paul Marc, Brent, Caleb, Dustin
B. Paul Marc, Caleb, Dustin, Brent
C. Dustin, Caleb, Brent, Paul Marc
D. Caleb, Brent, Paul Marc, Dustin

7 Katie made 4 gallons and 2 quarts of punch for a birthday party. How many quarts of punch did Katie make?

Write your answer in the space below.

8 The base of a trophy is shaped like a rectangle. The height of the base is 12 inches and the length is l inches. Which formula can be used to find A, the area of the rectangular base of the trophy?

A. $A = \frac{1}{2}(12 + l)$
B. $A = \frac{1}{2}(12l)$
C. $A = 12 + l$
D. $A = 12l$

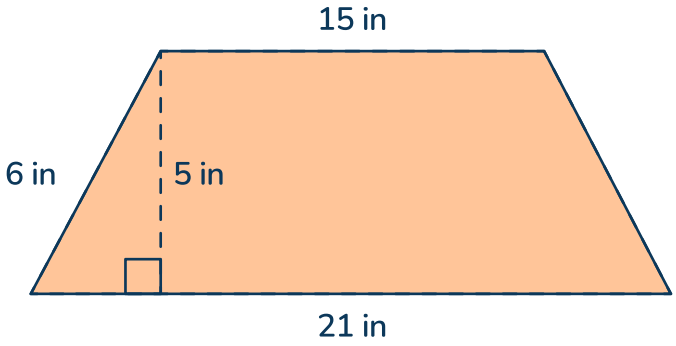
9 A group of 2nd graders at Hardin Elementary School were asked to choose one color as their favorite. The table below shows the number of 2nd graders that choose each color.

Favorite Color	
Color	**Number of 2nd graders**
Blue	12
Green	9
Purple	8
Orange	5
Red	16

Which statement is supported by the data in the table?

A. Blue is the favorite color for 30% of the 2nd graders.
B. Orange is the favorite color of 10% of the 2nd graders.
C. More than 20% of students chose green as their favorite color.
D. The color purple is associated with the mode for the favorite color of 2nd graders.

10 The dimensions of a trapezoid are given in inches.



What is the area of the trapezoid in square inches?

A. 180 in²
B. 202.5 in²
C. 90 in²
D. 52.5 in²

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11 Which statement about 5 multiplied by $\frac{1}{4}$ must be true?

A. The product is between 4 and 5.
B. The product is less than 5.
C. The product is equal to 3.
D. The product is greater than 5.

12 Sherika walked her dogs 17 of the 30 days in April. Which value is equal to the fraction of the days of April that Sherika walked her dogs?

A. 56.6%
B. 51%
C. 1.76
D. 0.05

13 Which expressions have a value of 21.2?

Select TWO correct answers.

- ☐ $6.7\left(\frac{2}{3}\right)$
- ☐ $4.24 \div 0.2$
- ☐ $34.754\ (0.61)$
- ☐ $15.1 \div \frac{1}{4}$
- ☐ $24.5\ (0.12)$

14 Which inequality is true if k = 1.5?

A. $4k < 5.6$
B. $9k < 8.6$
C. $19.4 \geq 5k$
D. $3.6k \leq 2.7$

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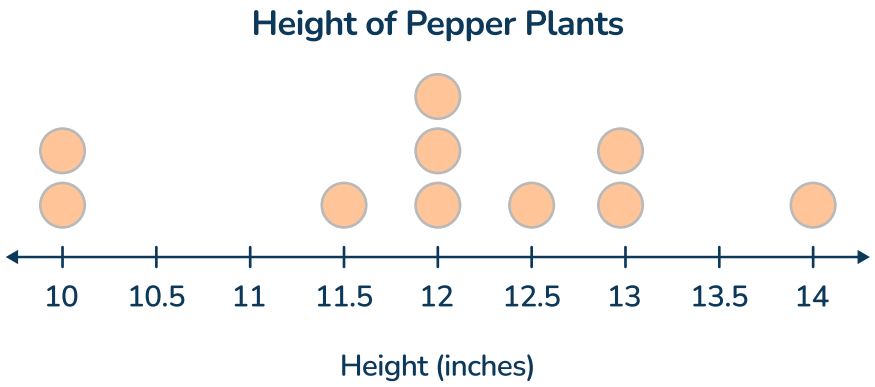
15 During his 60 minute hockey game, Jamie was on the ice 60% of the time.

What amount of time in minutes was Jamie on the ice?

A. 24 minutes
B. 30 minutes
C. 22 minutes
D. 36 minutes

16 The dot plot shows the height of Mikayla's pepper plants in inches.



Which statement is **NOT** supported by the data in the dot plot?

A. More pepper plants were 12 inches or taller than shorter than 12 inches.
B. Mikayla had 10 pepper plants.
C. Half of the plants were shorter than 12 inches.
D. There were 2 plants that were either 13 or 13.5 inches.

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17 Four points are labeled on the number line.

Which point represents the value of -1.5?

A. J
B. K
C. L
D. M

18 The perimeter of a rectangle is 62.4 square inches. The length of one side of the rectangle is 18 inches.

What is the width of one side of the rectangle?

A. 26.4 inches
B. 13.2 inches
C. 36 inches
D. 80.4 inches

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19 In triangle *LMN* the measure of angle *MLN* is 72° and the measure of angle *LNM* is 91°. What is the measure of the missing angle *LMN*, in degrees?

A. 17°
B. 163°
C. 197°
D. 28°

20 The table below shows the amount of points scored in college football games last weekend.

Number of points
45
35
24
66
56
43
38
40
28
31

Determine if each statement is true or false based on the table.
Select ONE correct answer for each row.

Statement	True	False
The range of the points scored in the table is 42.	A	B
The median of the points scored in the table is 39.	A	B

21 Which expression is equivalent to 6 (7f - 9)?

A. 13f - 15
B. 13f + 15
C. 42f - 54
D. 43f + 54

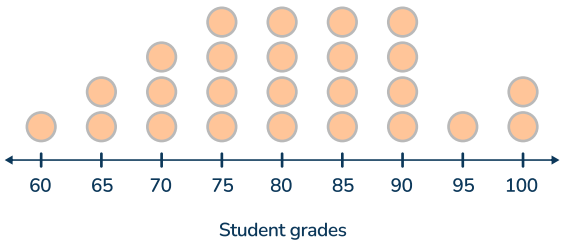
22 The stem and leaf plot shows the test scores for Mrs. Robinson's 4th period math class.

Stem	Leaf
6	0 5 5
7	0 0 0 5 5 5 5
8	0 0 0 0 5 5 5 5
9	0 0 0 0
10	0 0

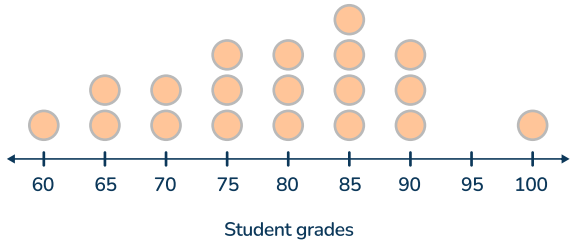
7 | 0 means 70 points

Which dot plot best represents the data in the stem and leaf plot?

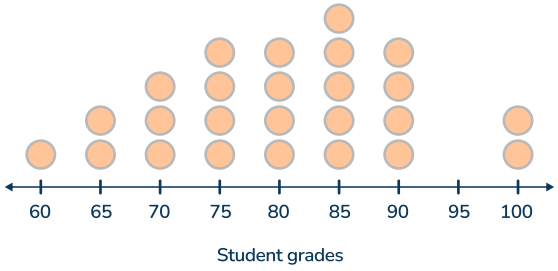
A.



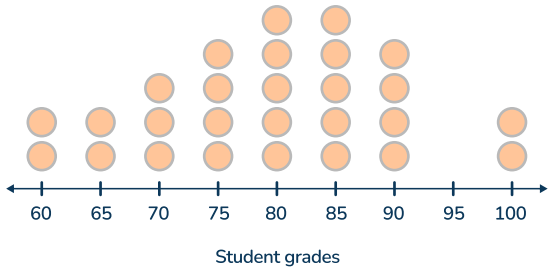
B.



C.



D.



23 Which list shows the temperatures in order from warmest to coldest in degrees Fahrenheit?

A. 11°F 3°F - 8°F - 13°F
B. - 13°F - 8°F 3°F 11°F
C. - 13°F 11°F - 8°F 3°F
D. 3°F - 8°F 11°F - 13°F

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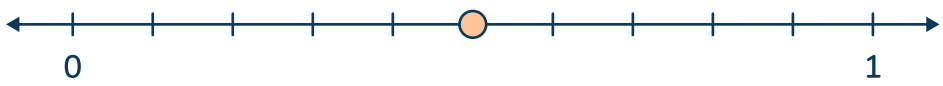
24 Eugene scored a 75% on his history test. Which number line shows a point that represents 75%?

A.

B.



C.

D.

25 200 fifth graders were asked their favorite genre of TV show to watch. 42 fifth graders answered that history documentaries were their favorite. What percentage of fifth graders named history documentaries as their favorite TV genre?

A. 21%
B. 42%
C. 23%
D. 82%

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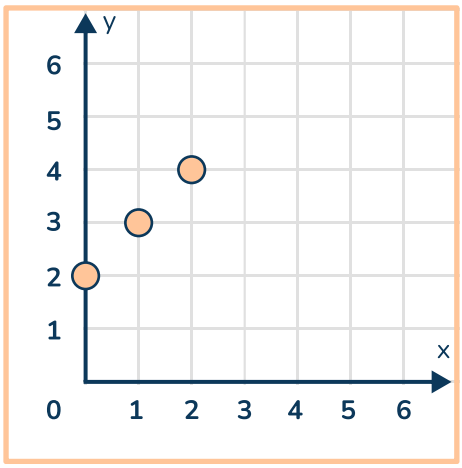
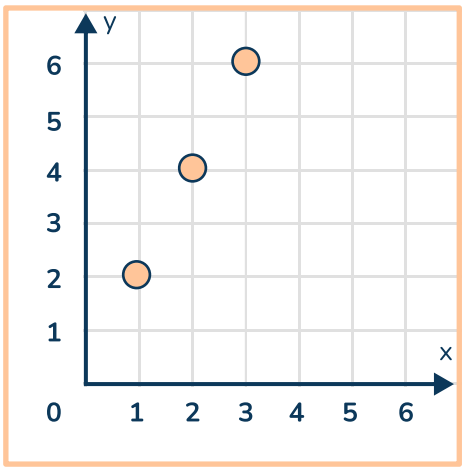
26 Which graph best represents the relationship between x and y in the equation y = 2x?

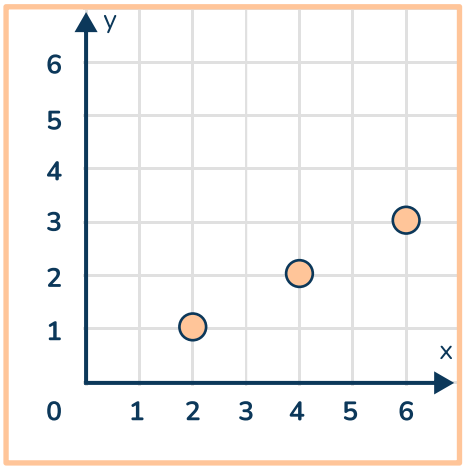
A.



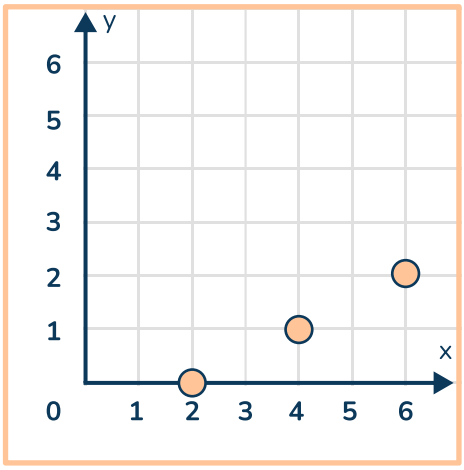
B.



C.



D.



27 Which statement is true for a debit card but NOT true for a credit card?

A. You can use an automated teller machine (ATM) to withdraw money when you need it.
B. You are issued a plastic payment card that allows you to electronically purchase goods and items.
C. The money spent will be withdrawn from your checking account when a purchase is made.
D. There is a fee associated with withdrawing too much money or overspending using the card.

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28 Kevin earns $12.50 an hour working in the stock room. How much would he earn if we worked 6.5 hours last week?

A. $19.00
B. $812.50
C. $81.05
D. $81.25

29 27 children signed up for summer sports camp during early enrollment. There were 43 children on the first day of camp.

Write an equation that can be used to find, s, the number of children that signed up for camp after early enrollment closed.

Write your answer in the box below.

30 What is the value of the expression shown?

$$4^2 + 7 \times (3 + 3) \div 2$$

A. 36
B. 34
C. 35
D. 37

31 Kimberly receives money for her report card grades every 6 weeks. She saves the same amount from each report card to help pay for her summer vacation. The table shows the total amount Kimberly saves based on each report card.

Report card number	1	2	3	4	5	6
Total money saved	$15	$30	$45	$60	$75	$90

Which list represents the dependent quantities from the table?

A. 1, 2, 3, 4, 5, 6
B. 15, 30, 45, 60, 75, 90
C. 16, 32, 48, 64, 80, 96
D. 14, 28, 43, 56, 70, 84

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32 Which equation is **NOT** true?

A. $4 - (-2) = 6$
B. $-7 + (-7) = -14$
C. $-15 \div (-5) = -3$
D. $6 + (-5) = 1$

Answers

STAAR Answer Key - 6th Grade					
Item position	Item type	Correct answer	TEKS Alignment	Reporting Category	Readiness or Supporting
1	Multiple choice	C	6.2.4.B	2	Readiness
2	Multiple choice	A	6.4.14.H	4	Supporting
3	Multiple choice	D	6.4.13.A	4	Readiness
4	Open-ended	(3,2), (-2,-3) See item rationale	6.3.11.A	3	Readiness
5	Multiple choice	C	6.2.10.A	2	Readiness
6	Multiple choice	A	6.1.2.D	1	Readiness
7	Open-ended	18 quarts	6.3.4.H	3	Readiness
8	Multiple choice	D	6.3.8.C	3	Supporting
9	Multiple choice	B	6.4.12.D	4	Readiness
10	Multiple choice	C	6.3.8.D	3	Readiness
11	Multiple choice	B	6.2.3.B	2	Supporting
12	Multiple choice	A	6.1.4.G	1	Readiness
13	Multi-select	4.24 ÷ 0.2 34.754 (0.61)	6.2.3.E	2	Readiness

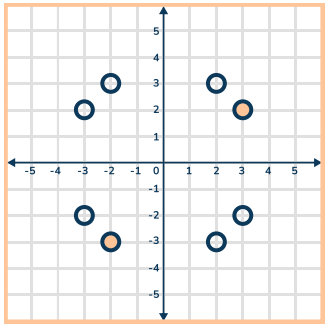
STAAR Answer Key - 6th Grade					
Item position	Item type	TEKS Alignment	Correct answer(s)	Reporting Category	Readiness or Supporting
14	Multiple choice	C	6.2.10.B	2	Supporting
15	Multiple choice	D	6..25.B	2	Readiness
16	Multiple choice	C	6.4.13.A	4	Readiness
17	Multiple choice	B	6.1.2.B	1	Supporting
18	Multiple select	B	6.2.10.A	2	Readiness
19	Multiple choice	A	6.3.8.A	3	Supporting
20	True/False	True, true	6.4.12.C	4	Readiness
21	Multiple choice	D	6.1.7.D	1	Readiness
22	Multiple choice	C	6.4.12.A	4	Supporting
23	Multiple choice	A	6.1.2.D	1	Readiness
24	Multiple choice	C	6.1.4.F	1	Supporting
25	Multiple choice	A	6.2.5.B	2	Readiness
26	Multiple choice	B	6.2.6.C	2	Readiness
27	Multiple choice	C	6.4.14.B	4	Supporting
28	Multiple choice	D	6.2.3.E	2	Readiness
29	Open-ended	43-s=27 or s=43-27	6.2.9.A	2	Supporting
30	Multiple choice	D	6.1.7.A	1	Readiness
31	Multiple choice	B	6.2.6.A	2	Supporting
32	Multiple choice	A	6.2.3.D	2	Readiness

Rationales

Item	KEY	Rationale
1	A is incorrect	Students may choose this answer if they do have a strong command of finding equivalent ratios.
	B is incorrect	Students may choose this answer if they sum the total number of boys and girls in the class.
	C is correct	This is the correct answer. 2:5 = 8:20 Multiplying each number of the original ratio by 4.
	D is incorrect	Students may choose this answer if they do have a strong command of finding equivalent ratios.

Item	KEY	Rationale
2	A is correct	In order to calculate how much more a warehouse manager will make than a staff accountant, students must first determine the amount of money made by both occupations over 20 years. Staff accountant: 64,900 x 20 = 1,298,000; Warehouse manager: 71,500 x 20 = 1,430,000. Students will then subtract the two values: 1,430,000 - 1,298,000 = 132,000.
	B is incorrect	The student likely calculated the amount of money that will be made by a Staff accountant over 20 years. 64,900 x 20 = 1,298,000
	C is incorrect	The student selected this answer if they determined the amount of money that would be made by a warehouse manager over 10 years instead of 20 years.
	D is incorrect	The student likely calculated the amount of money that will be made by a Warehouse manager over 20 years. 71,500 x 20 = 1,430,000.

Item	KEY	Rationale
3	A is incorrect	The student likely didn't understand that they would need to find half of the total runners in the heat (5 runners), and that only 4 runners finished in under 15 seconds.
	B is incorrect	The student likely did not correctly interpret the number of runners that finished under 14 seconds (1 runner) and over 16 seconds (2 runners).
	C is incorrect	The student likely miscounted the number of runners that took part in the 50m race.
	D is correct	To determine which statement is correct, the student should have added the number of runners that finished between 15 and 17 seconds (6 runners) and the number of runners that finished between 13 and 15 seconds (4 runners).

Item	KEY	Rationale
4		In order to locate the two correct points, students must know that the first number in a coordinate point represents the x-axis and the 2nd number represents the y-axis. For the point (3,2) the student should follow the x-axis to positive 3, and then up the y-axis to positive 2. For the point (-2, -3) the student should follow the x-axis to -2 then down the y-axis to negative 3.

Item	KEY	Rationale
5	A is incorrect	The student likely subtracted 150 from both sides of the equation, but did not place the negative sign as needed.
	B is incorrect	The student likely adds 150 to the left side of the equation instead of subtracting, resulting in 270.
	C is correct	To determine the solution to the equation, the student should have subtracted 150 from both sides of the equation, resulting in - 30 = x.
	D is incorrect	The student likely adds 150 to the left side of the equation instead of subtracting, resulting in 270 then added a negative sign.

Item	KEY	Rationale
6	A is correct	In order to place the amounts of time the brother spent on chores, students should have found a common denominator among the mixed numbers. Students may also recognize that $\frac{1}{4}$ is the smallest of the fractions, and found a common denominator amongst the other given mixed numbers.
	B is incorrect	The student likely based the order off the denominator, not the actual size of the entire mixed number.
	C is incorrect	Students put the amounts of time in order from least to greatest instead of greatest to least.
	D is incorrect	The student likely has a misconception on how to place mixed numbers in order.

Item	KEY	Rationale
7	18 quarts	In order to find the total number of quarts Katie made, students will first need to convert the number of gallons to quarts. 1 gallon = 4 quarts; 44 = 16. Then add the 2 quarts; 16 + 2 = 18 quarts.

Item	KEY	Rationale
8	A is incorrect	The student likely has misconceptions on how to find the area of a rectangle. Students could use more practice with how to find the area of shapes.
	B is incorrect	The student likely used the formula of the area of a triangle, instead of the formula of the area of a rectangle.
	C is incorrect	The student likely has misconceptions on how to find the area of a rectangle. Students could use more practice with how to find the area of shapes.
	D is correct	The student correctly used the formula for the area of a rectangle and plugged in the correct values for each.

Item	KEY	Rationale
9	A is incorrect	Students would need to calculate the percentage that the number of students with blue as their favorite color makes up. 12 ÷ 50 = 0.24 = 24%.
	B is correct	In order to find the percentage of students that chose orange as their favorite color, you would divide the number of students by the total number of students asked, 50. 8 ÷ 50 = 0.1 = 10%.
	C is incorrect	Students would need to calculate the percentage that the number of students with blue as their favorite color makes up. 9 ÷ 50 = 0. 18 = 18%.
	D is incorrect	Mode is the value that appears the most frequently in a set of data. For the favorite color of 2nd graders, purple is not the mode, red is.

Item	KEY	Rationale
10	A is incorrect	Students likely plugged in the values correctly in the area of a trapezoid formula, but forgot the multiply by $\frac{1}{2}$.
	B is incorrect	The students likely used the correct formula, but incorrectly plugged in the values to the formula. Students need more practice in using the trapezoid formula and identifying the bases and height.
	C is correct	In order to find the area of a trapezoid, students need to use the formula $A = \frac{1}{2}(b_1 + b_2)h$.
	D is incorrect	The students likely used the correct formula, but incorrectly plugged in the values to the formula. Students need more practice in using the trapezoid formula and identifying the bases and height.

Item	KEY	Rationale
11	A is incorrect	The student is likely unsure of the resulting product. The student needs more practice with multiplying whole numbers and fractions.
	B is correct	In order to find the correct answers, students should be familiar with the concept that when you multiply a whole number by a fraction, the product will be smaller than the whole number.
	C is incorrect	The student is likely unsure of the resulting product. The student needs more practice with multiplying whole numbers and fractions.
	D is incorrect	The student is likely unsure of the resulting product. The student needs more practice with multiplying whole numbers and fractions.

Item	KEY	Rationale
12	A is correct	In order to find the correct answer, students must divide the number of days Sherika walked her dog, 17, by the number of days in April. 17 ÷ 30 = 0.566...; to find the percentage, multiply by 100; 0.566... x 100 = 56.6%.
	B is incorrect	The student likely made a decimal placement error when solving the problem. The student needs more work on generating equivalent forms on fractions and percentages in real-world problems.
	C is incorrect	The student likely divided 30 by 17 instead of dividing 17 by 30, then stopped, resulting in an incorrect answer.
	D is incorrect	The student likely divided the number of days she walked the dogs by the total number of days in the month, but misplaced the decimal when recording the quotient.

Item	KEY	Rationale
13	4.24 ÷ 0.2; 34.754(0.61)	In order to find the two expressions that have a value of 21.1, students are going to have to solve the given expressions to find those that come to the answer 21.2. 4.24 ÷ 0.2 = 21.2 34.754(0.61) = 21.2

Item	KEY	Rationale
14	A is incorrect	In order to determine the inequality that is true, students must first solve for 4k. 4 x 1.5 = 6, which is NOT less than 5.6.
	B is incorrect	In order to determine the inequality that is true, students must first solve for 9k. 9 x 1.5 = 13.5, which is NOT less than 8.6.
	C is correct	In order to determine the inequality that is true, students must first solve for 5k. 5 x 1.5 = 7.5, which is less than 19.4.
	D is incorrect	In order to determine the inequality that is true, students must first solve for 3.6k. 3.6 x 1.5 = 5.4, which is NOT less than or equal to 2.7.

Item	KEY	Rationale
15	A is incorrect	The student likely calculated the amount of time Jamie was not on the ice, not the time he was on the ice.
	B is incorrect	Students likely have a misconception or are unsure how to solve for the amount of time Jamie was on the ice. Students likely need more practice with solving these types of problems.
	C is incorrect	Students likely have a misconception or are unsure how to solve for the amount of time Jamie was on the ice. Students likely need more practice with solving these types of problems.
	D is correct	In order to find the minutes Jamie was on the ice, students will first need to write the percentage as a fraction, $\frac{60}{100}$. Students should then multiply the fraction by 60. 60 ÷ 100 x 60 = 36 minutes.

Item	KEY	Rationale
16	A is incorrect	The data shows that there were 7 plants 12 inches or taller and only 3 plants that are shorter than 12 inches. The student likely misunderstood that the question was asking for a statement not supported by the data.
	B is incorrect	The data does show that Mikayla had 10 pepper plants; the student likely misunderstood that the question was asking for a statement not supported by the data.
	C is correct	In order to determine which statement was not supported by the data, the student would need to first find the total number of pepper plants Mikayla had (10 plants). They would then need to recognize that half of 10 is 5, and count the number of plants that were shorter than 12 inches (3). 3 is less than half, therefore this statement is not supported.
	D is incorrect	The data shows that only 2 plants were 13 inches; the student likely misunderstood that the question was asking for a statement not supported by the data.

Item	KEY	Rationale
17	A is incorrect	If the student selected this answer choice, the student likely has a misconception or misunderstanding of how to locate the absolute value on a number line.
	B is correct	In order to find the correct answer, students will need to be able to locate the point -1.5 on a number line, which is located between -1 and -2.
	C is incorrect	The student may have selected this answer due to the point being on 1.
	D is incorrect	If the student selected this answer choice, the student likely has a misconception or misunderstanding of how to locate the absolute value on a number line.

Item	KEY	Rationale
18	A is incorrect	The student likely subtracted the total of the given sides from the total perimeter, 62.4, and assumed that was the measure of the width.
	B is correct	In order to find the width of the rectangles, students must multiply 18 x 2 to find the total length of the rectangle, 36. Students must then subtract 62.4 - 36 to find the total width of the rectangle. Then students must divide 26.4 ÷ 2 to find the measure of one side.
	C is incorrect	The student likely multiplied 18 x 2 and assumed that would give them the measure of the width.
	D is incorrect	Students were likely unsure of how to solve this problem and added the two numbers given to arrive at this answer choice.

Item	KEY	Rationale
19	A is correct	In order to find the measure of the missing angle, students must first add together the two angles given; 72 + 91 = 163. Then students must subtract from 180, the sum of the angles of a triangle; 180 - 163 = 17.
	B is incorrect	The student most likely added the two given angles, forgetting to subtract that amount from 180°, the sum of the angles of a triangle.
	C is incorrect	The student likely added the two given angles together correctly, but subtracted from 360 instead of 180.
	D is incorrect	The student likely added the measures of the given angles and subtracted from 180, but made a mistake when subtracting, forgetting to regroup in the tens place.

Item	KEY	Rationale
20	True, True	In order to find the range of the points scored in the football games, students should find the difference between the smallest and highest numbers in the set. 66 - 24 = 42. In order to find the median of the points scored, students will need to organize the data from smallest to largest and find the midpoint value(s). Because there are 10 data points, students should add the two middle numbers, 38 + 40 = 78, and then divide; 78 ÷ 2 = 39.

Item	KEY	Rationale
21	A is incorrect	Students may choose this answer if they do not have a strong understanding of the distributive property and add the numbers.
	B is incorrect	Students may choose this answer if they do not have a strong understanding of the distributive property and add the numbers.
	C is correct	This is the correct answer. $6(7f - 9) = 42f - 54$
	D is incorrect	Students may choose this answer if they make a mistake with the signs of numbers when multiplying.

Item	KEY	Rationale
22	A is incorrect	This graph is not a representation of the stem-and-leaf plot because it has one less frequency in the 85 column and 1 extra frequency in the 95 column.
	B is incorrect	This graph is not a true representation of the stem-and-leaf plot as it does not have all of the frequencies represented on it.
	C is correct	In order to find the correct representation of the given stem and leaf plot, the students should count the frequency of each grade given on the math test: 60 - 1, 65 - 2, 70 - 3, 75 - 4, 80 - 4, 85 - 5, 90 - 4, 95 - 0 , 100 - 2. The student should then find the dot plot that matches the correct frequency.
	D is incorrect	This graph is not a true representation of the stem-and-leaf plot as it does not match the data given in the stem-and-leaf plot.

Item	KEY	Rationale
23	A is correct	In order to place the temperatures in order from warmest (greatest) to coldest (smallest), students should understand that positive numbers hold greater value than negative numbers. Therefore, the warmest temperature is 11°, then 3°, followed by the negative numbers -8° and -13°.
	B is incorrect	The answer choice shows the temperatures in order from coldest to warmest, not warmest to coldest.
	C is incorrect	The numbers are shown in order from “largest to smallest” if the value of each digit was a whole number. Students need more practice with rational numbers.
	D is incorrect	The numbers are shown in order from “smallest to largest” if the value of each digit was a whole number. Students need more practice with rational numbers.

Item	KEY	Rationale
24	A is incorrect	The point on the number line represents 70%. Students need practice with representing percentages on a number line.
	B is incorrect	The point on the number line represents 50%. Students need practice with representing percentages on a number line.
	C is correct	In order to identify the correct point on the number line, students would first need to identify what would be 70% and 80% and find the point between the two.
	D is incorrect	The point on the number line represents 80%. Students need practice with representing percentages on a number line.

Item	KEY	Rationale
25	A is correct	To determine the number of students that chose history documentaries as their favorite tv genre, the student should have divided the total number of fifth graders (200) by the number of students that chose history documentaries 42 ÷ 200 = 0.21. Students should then convert the decimal to a percentage by multiplying by 100; 0.21 x 100 = 21%.
	B is incorrect	The student likely chose the number of fifth graders that chose the history documentaries as their favorite tv genre.
	C is incorrect	The student likely divided incorrectly; 42 ÷ 200 = 0.23, which then when converted into a percentage, resulted in the wrong answer.
	D is incorrect	The student likely chose the percentage that represents the number of students that chose a genre other than history documentaries, instead of the ones who did select history documentaries.

Item	KEY	Rationale
26	A is incorrect	The graph represents the equation y = x + 2. The student needs more practice with representing equations on a graph.
	B is correct	In order to select the graph that represents y = 2x, the student could have first determined that when x = 1, y = 2 • 1 = 2, which would be represented by the ordered pair (1, 2). The student would next determine that when x = 2, y = 2 • 2 = 4, which would be represented by the ordered pair (2, 4). The student would then find that when x=3, y = 2 • 3 = 6, which would be represented by the ordered pair (3, 6). They would then find the graph that matches these ordered pairs.
	C is incorrect	The graph represents the equation y = $\frac{1}{2}$x. The student needs more practice with representing equations on a graph.
	D is incorrect	The graph represents the equation y = $\frac{1}{2}$x -1. The student needs more practice with representing equations on a graph.

Item	KEY	Rationale
27	A is incorrect	This is true of both credit cards and debit cards. You can use an ATM to withdraw cash using a debit and credit card.
	B is incorrect	This is true of both credit cards and debit cards. Both cards issued are plastic and allow you to make purchases in-store or online.
	C is correct	Debit cards are connected to a checking account, or an account that has money in it. When a purchase is made, funds are removed from that account.
	D is incorrect	This is true of both credit cards and debit cards. There are traditionally fees associated with withdrawals that go over the spending limit or money in an associated checking account.

Item	KEY	Rationale
28	A is incorrect	The student most likely added the amount earned per hour by the hours worked.
	B is incorrect	Students likely multiplied the numbers correctly, but are unsure how to place the decimals in the final product.
	C is incorrect	Students likely multiplied the numbers correctly, but made a mistake when regrouping during multiplication.
	D is correct	In order to calculate the amount Kevin earned last week, you have to multiply the number of hours worked, 6.5, by the amount earned each hour, $12.50. 12.50 x 6.5 = 81.25.

Item	KEY	Rationale
29	43 - s = 27 or s = 43 - 27	In order to write an appropriate equation, the student will need to identify the number of children that were signed up between early enrollment and the beginning of camp. This can be found by either subtracting the number of children at the camp and the number that enrolled to equal 27 or subtracting the number of children at camp on day one from the number that signed up early.

Item	KEY	Rationale
30	A is incorrect	The student likely solved the expression, moving from left to right instead of using order of operations. The student would first solve for the exponent 42 = 16, then moving along, adding 7; 16 + 7 = 23, then multiplying by 3; 23 x 3 = 69, adding 3; 69 + 3 = 72, and finally dividing by 2; 72 ÷ 2 = 36.
	B is incorrect	The student likely correctly solved the expression using order of operations. The student solved the operation within the parenthesis (3+3=6), then solved the exponent $4^2 = 16$, which gives the expression 16 + 7 x 6 ÷ 2. However, when moving through the multiplication, incorrectly solved 7 x 6 = 36 instead of 42.
	C is incorrect	The student likely correctly solved the expression using order of operations. However, when completing the last step, addition, added incorrectly.
	D is correct	In order to find the correct value of the expression, the student must follow the order of operations, or PEMDAS. The expression should have been completed in this order: 1) the student must solve the operation within the parenthesis (3+3=6), then solved the exponent $4^2 = 16$, which gives the expression 16 + 7 x 6 ÷ 2. Next is multiplication and division, which is solved in the order it is in the expression, therefore 7 x 6 = 42 and 42 ÷ 2 = 21. The student is then left with 16 + 21 = 37.

Item	KEY	Rationale
31	A is incorrect	The list of quantities in answer choice A are independent quantities.
	B is correct	In order to select the correct list of quantities, students must first understand that a dependent quantity is a quantity that depends on another quantity. The quantities in the “total money saved” row are dependent on the quantity before it.
	C is incorrect	The students selected this answer if they had a misunderstanding of how to find the dependent quantity and added the two quantities together.
	D is incorrect	The students selected this answer if they had a misunderstanding of how to find the dependent quantity and subtracted the two quantities.

Item	KEY	Rationale
32	A is incorrect	Positive 4 minus negative 2 equals positive six. This equation is correct.
	B is incorrect	Negative 7 plus negative 7 equals negative 14. This equation is correct.
	C is correct	In order to find the equation that is not true, you will need to solve it to verify. When two negative numbers are divided by one another, as is done in this equation, they equal a positive number. To make this equation true, the equation should state: $-15 \div (-5) = 3$.
	D is incorrect	Positive 6 plus negative 5 equals positive one. This equation is correct.