Craig went bowling with $25 to spend. He rented shoes for $5.25 and paid $4.00 for each game. What was the greatest number of games Craig could have played?

A   4

B   5

C   6

D   7

Key: A
Measured CCLS: 7.EE.4b

Commentary: This question measures 7.EE.4b because it assesses a student's ability to solve word problems leading to inequalities of the form $px + q < r$, where p, q, and r are specific rational numbers. Additionally, students must be able to interpret the solution in the context of the problem; if the number of games Craig could have played is represented by x, then the solution statement $x < 4.9375$ must be interpreted in context as indicating a maximum of 4 games.

Extended Rationale

Answer Choice A: "4"; This response represents the correct solution to the word problem. The student may have set up and solved the inequality as shown below, where x represents the number of games played:

$4x + 5.25 < 25$

$4x < 19.75$

$x < 4.9375$

The student who selects this response understands that the greatest number of games played has to be a whole number less than 4.9375.

Answer Choice B: "5"; This response is incorrect and may occur when a student lacks understanding of how to write an inequality that models this situation, possibly writing incorrectly that $4x + 5.25 > 25$, where x represents the number of games played. The student may then assume that the greatest number of games played has to be 5, the closest whole number greater than 4.9375.

$4x + 5.25 > 25$

$4x > 19.75$

$x > 4.9375$

Answer Choice C: "6"; This response is incorrect and may occur when a student lacks understanding of how to write an inequality that models this situation, neglecting the effect of the shoe rental and possibly writing incorrectly that $4x < 25$, where x represents the number of games played.

$4x < 25$

$x < 6.25$

The label on a $1\frac{1}{2}$-pound bag of wildflower seeds states that it will cover an area of 375 square feet. Based on this information, what is the number of square feet that 1 pound of wildflower seeds will cover?

A $\frac{1}{250}$

B   250

C $562\frac{1}{2}$

D   750

Key: B
Measured CCLS: 7.RP.1

Commentary: This question measures 7.RP.1 because it assesses the student's ability to solve real-world problems involving the computation of unit rates associated with ratios of fractions.

Extended Rationale

Answer Choice A: "$\frac{1}{250}$"; This response is incorrect and may occur if a student makes an error when solving using an equation. One possible error is shown below.

$$\frac{1\frac{1}{2}}{375} = \frac{1}{x}$$

$$1\frac{1}{2}x = 375$$

$$x = 250 \rightarrow \frac{1}{250}\ \text{ft}^2$$

A student who selects this response may have limited understanding of how to solve real-world problems involving the computation of unit rates associated with ratios of fractions.

Answer Choice B: "250"; This answer represents the number of square feet that 1 pound of wildflower seeds will cover. The student may have used a method such as one of those shown below.

Method 1:
$$\frac{1\frac{1}{2}}{375} = \frac{1}{x}$$

$$1\frac{1}{2}x = 375$$

$$x = 250$$

3

124070026_4

Which expression is equivalent to $(7x - 5) - (3x - 2)$?

A $10x - 7$

B $10x - 3$

C $4x - 7$

D $4x - 3$

Key: D
Measured CCLS: 7.EE.1

Commentary: This question measures 7.EE.1 because it involves the application of properties of operations as strategies to subtract linear expressions. These expressions, $(7x - 5)$ and $(3x - 2)$, are considered linear because each term is either a constant or the product of a constant and the first power of a variable.

Extended Rationale

Answer Choice A: "$10x - 7$"; This response is incorrect and may reflect a lack of understanding of subtracting linear expressions. This error may occur when a student combines like terms without regard for the subtraction sign between the linear expressions. A student who selects this response may not understand how to correctly apply the negative sign when rearranging expressions or subtracting terms with negative constants.

Answer Choice B: "$10x - 3$"; This response is incorrect and may reflect a lack of understanding of subtracting linear expressions. The student may incorrectly have added $7x$ and $3x$ while correctly subtracting $-5 - (-2)$. A student who selects this response may not understand how to correctly apply the negative sign when rewriting expressions.

Answer Choice C: "$4x - 7$"; This response is incorrect and may reflect a lack of understanding of subtracting linear expressions. The student may have subtracted $7x - 3x$ but incorrectly added $-5 + (-2)$. A student who selects this response may not understand how to correctly subtract negative constants in expressions.

Answer Choice D: ""$4x - 3$"; This response represents the correct equivalent expression.

$(7x - 5) - (3x - 2) =$

$7x - 3x - 5 - (-2) =$

$4x - 3$

Answer choices A, B, and C are plausible but incorrect. They represent common student errors made when applying the properties of operations as strategies to subtract linear expressions.

The Lions won 16 games last year. This year the Lions won 20 games. What is the percent increase in the number of games the Lions won from last year to this year?

A   20%

B   25%

C   80%

D   125%

Key: B
Measured CCLS: 7.RP.3

Commentary: This question measures 7.RP.3 because it assesses the use of proportional relationships to solve a multi-step percent problem. This particular question involves calculating percent increase.

Extended Rationale

Answer Choice A: "20%"; This response is incorrect and may reflect a limited understanding of solving a percent problem. The student may have determined the increase in wins to be 4 but then applied an inappropriate proportional relationship by comparing 4 to the new win total of 20.

$$20 - 16 = 4$$

$$\frac{4}{20} = \frac{20}{100}$$

A student who selects this response may not yet have a conceptual understanding of how to use proportional relationships to solve multi-step ratio and percent problems.

Answer Choice B: "25%"; This response represents the correct percent increase in the number of games the Lions won from last year to this year.

$$\frac{20}{16} = \frac{125}{100}$$

$$125 - 100 = 25$$

A student who selects this response has an understanding of how to use proportional relationships to solve multi-step ratio and percent problems.

Answer Choice C: "80%"; This response is incorrect and may reflect a limited understanding of solving a percent problem. Instead of comparing the change in wins, 4, to last year's win total, the student may have compared last year's win total, 16, to this year's win total of 20.

$$\frac{16}{20} = \frac{80}{100}$$

A student who selects this response may not yet have an understanding of how to use proportional relationships to solve multi-step percent problems.

The table shows prices for shoe rental, games, and snacks at the bowling alley.

BOWLING ALLEY PRICES

Item	Price
Shoe rental	$2.75
One game of bowling	$2.50
Small soda	$0.95
Large soda	$1.50
Nachos	$1.75

Gina rented shoes, bowled 3 games, and bought 1 order of nachos. She used a coupon for $\frac{1}{2}$ off the price of her bowling games. What was Gina's total cost before tax was added?

A $5.75

B $6.00

C $8.25

D $12.00

Key: C
Measured CCLS: 7.NS.3

Commentary: This question measures 7.NS.3 because it assesses the student's ability to solve real-world problems involving the four operations with rational numbers.

Extended Rationale

Answer Choice A: "$5.75"; This response is incorrect and may occur when a student has limited understanding of how to solve real-world problems involving the four operations with rational numbers. The student who selects this response may have neglected to multiply the cost of bowling one game by 3, since Gina bowled 3 games.

$x = 2.75 + \frac{(2.5)}{2} + 1.75$

$x = 2.75 + 1.25 + 1.75$

$x = 5.75$

8

The population of a city is expected to increase by 7.5% next year. If *p* represents the current population, which expression represents the expected population next year?

A $1.75p$

B $1.075p$

C $p + 0.075$

D $1 + 0.075$

Key: B
Measured CCLS: 7.EE.2

Commentary: This question measures 7.EE.2 because it requires the student to write an expression to shed light on how the quantities in the expression are related in a problem context. In this case, the student writes the expression $1.075p$ to represent "the expected population next year," which may result from adding *p*, the current population, to $0.075p$, the expected increase in population next year. The expression $1.075p$ relates the current population to the expected population next year using the expected percent increase.

Extended Rationale

Answer Choice A: "$1.75p$"; This response is incorrect and may occur when a student incorrectly represents the expected increase with the expression $0.75p$ and then adds this to *p*. A student who selects this response may have insufficient understanding of how to write an expression to shed light on how the quantities in the expression are related in this problem context.

Answer Choice B: "$1.075p$"; This response represents the correct expression that shows the expected population in the following year. A student who selects this response understands how the quantities in the expression are related in this problem context.

Answer Choice C: "$p + 0.075$"; This response is incorrect and may occur when a student incorrectly represents the expected increase with the expression 0.075 and then adds this to *p*. A student who selects this response may have insufficient understanding of how to write an expression to shed light on how the quantities in the expression are related in this problem context.

Answer Choice D: "$1 + 0.075$"; This response is incorrect and may occur when a student incorrectly represents the current population with the expression 1 and the expected increase with the expression 0.075, and then adds these together. A student who selects this response may have insufficient understanding of how to write an expression to shed light on how the quantities in the expression are related in this problem context.

Answer choices A, C, and D are plausible but incorrect. They represent common student errors made when writing an expression to shed light on how the quantities in the expression are related in a problem context.

Laticia randomly selected 25% of the seventh-grade students in her school and asked them their favorite season. Of the students surveyed, 51 chose summer as their favorite season. Based on the data, what is the most reasonable prediction of the number of seventh-grade students in her school who would choose summer as their favorite season?

A 15

B 75

C 150

D 200

Key: D
Measured CCLS: 7.SP.2

Commentary: This question measures 7.SP.2 because it assesses using data from a random sample to draw inferences about a population with an unknown characteristic of interest. From a random sample of 25% of the seventh-grade students, the student is asked to make an inference about the population of all seventh-grade students.

Extended Rationale

Answer Choice A: "15"; This response is incorrect and may occur when the student finds 25% of 51 and then rounds the answer to 15. A student who selects this response may not have an understanding of how to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Answer Choice B: "75"; This response is incorrect and may occur when the student adds 51 and 25 and then rounds the answer to the nearest 5. A student who selects this response may not have an understanding of how to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Answer Choice C: "150"; This response is incorrect and may occur when the student estimates 3 times 51 instead of 4 times 51.

$51 \times 3 \simeq 150$

A student who selects this response may not have an understanding of how to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Answer Choice D: "200"; This response is the most reasonable prediction of the number of seventh-grade students in Laticia's school who would choose summer as their favorite season. Since 25% of the students were surveyed and 51 of those surveyed chose summer, it is reasonable that, because the sample was selected randomly, around 200 students in the entire population would choose summer.

$51 \times 4 \simeq 200$

A student who selects this response has an understanding of how to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Ms. Graves gave her class 12 minutes to read. Carrie read $5\frac{1}{2}$ pages in that time.

At what rate, in pages per hour, did Carrie read?

A $1\frac{1}{10}$

B   22

C $27\frac{1}{2}$

D   66

Key: C
Measured CCLS: 7.RP.1

Commentary: This question measures 7.RP.1 because it assesses the student's ability to solve real-world problems involving the computation of unit rates associated with ratios of fractions.

Extended Rationale

Answer Choice A: "$1\frac{1}{10}$"; This response is incorrect and may occur if a student makes an error when simplifying a complex fraction. One possible error is shown below.

$$\frac{5\frac{1}{2}}{\frac{12}{60}} \rightarrow 5\frac{1}{2} \times \frac{12}{60} = 1\frac{1}{10}$$

A student who selects this response may have limited understanding of how to compute unit rates associated with ratios of fractions.

Answer Choice B: "22"; This response is incorrect and may occur if a student makes an error when converting the time in minutes to the time in hours. One possible error is shown below.

$$5\frac{1}{2} \div \frac{12}{60} \rightarrow 5\frac{1}{2} \div \frac{1}{4} = 22$$

A student who selects this response may have limited understanding of how to compute unit rates associated with ratios of fractions of quantities measured in different units.

Answer Choice C: "$27\frac{1}{2}$"; This response represents the correct rate, in pages per hour, at which Carrie read. The student may have used a method such as one of those below.

Method 1:
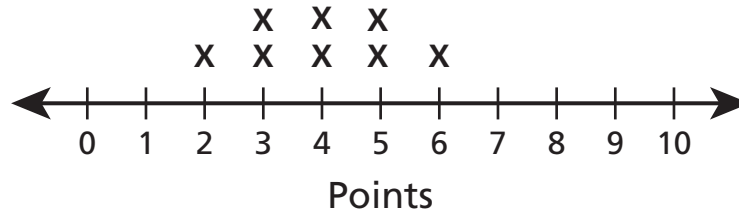$$\frac{5\frac{1}{2}}{\frac{12}{60}} = \frac{x}{1}$$

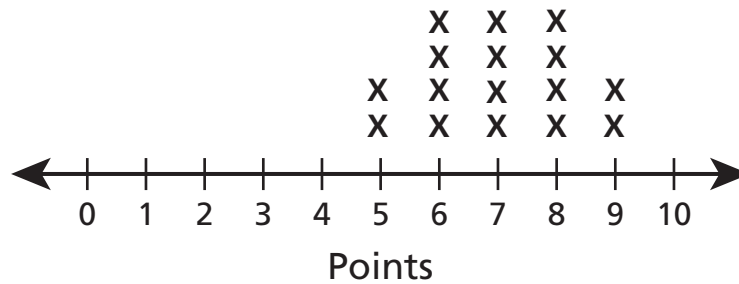$$\frac{12}{60}x = 5\frac{1}{2}$$

$$x = 27\frac{1}{2}$$

Ms. Andrews made the line plots below to compare the quiz scores for her first-period math class and her second-period math class. She gave the same quiz to each class.

QUIZ SCORES

First-Period Class

```
                X   X   X
          X     X   X   X   X
    ←———+———+———+———+———+———+———+———+———+———+———+———→
        0   1   2   3   4   5   6   7   8   9   10
                        Points
```

Second-Period Class

```
                        X   X   X
                        X   X   X
                    X   X   X   X   X
                    X   X   X   X   X
    ←———+———+———+———+———+———+———+———+———+———+———+———→
        0   1   2   3   4   5   6   7   8   9   10
                        Points
```

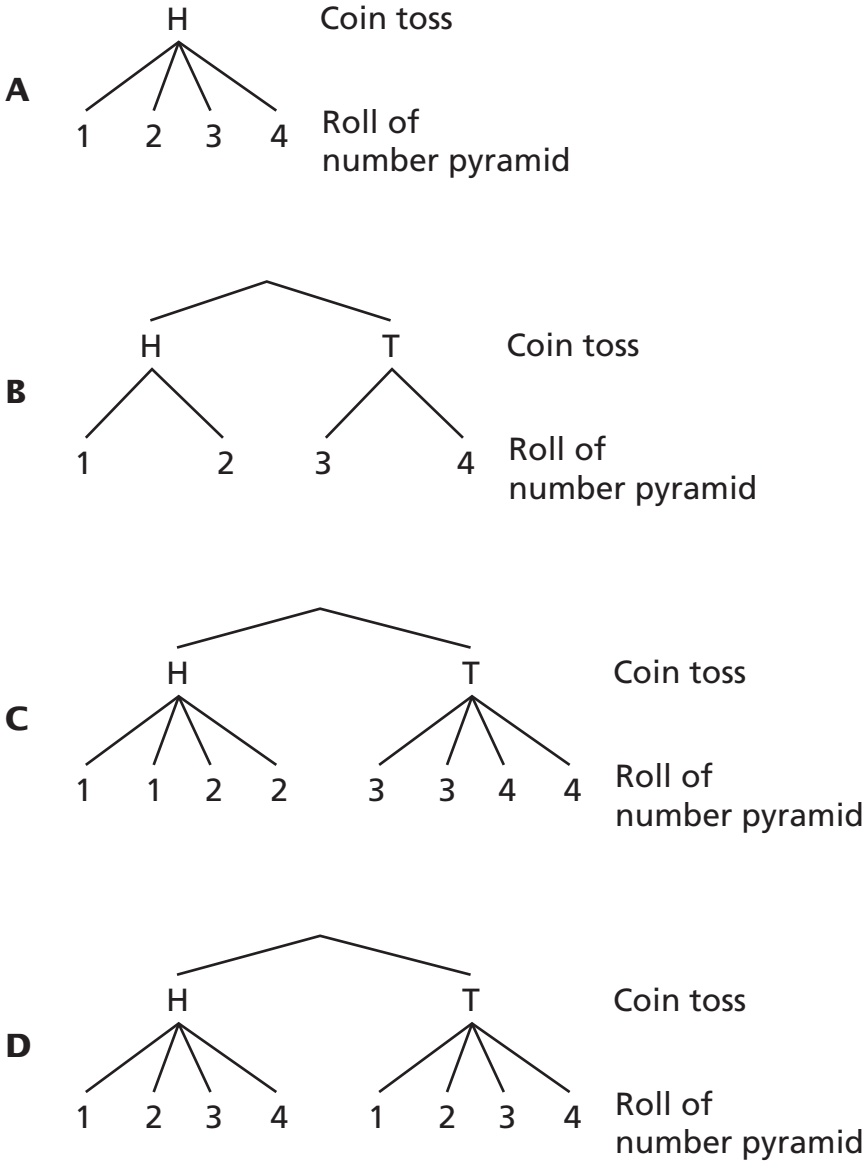What conclusion can Ms. Andrews make about the performance of her first- and second-period classes?

A   The first-period class had a higher median score than the second-period class.

B   The second-period class scores had a higher mean than the first-period class scores.

C   The first-period class scores had a greater range than the second-period class scores.

D   The second-period class scores had a greater mean absolute deviation than the first-period class scores.

Key: B
Measured CCLS: 7.SP.3

Commentary: This question measures 7.SP.3 because it assesses the student's ability to informally assess and describe the degree of visual overlap of two numerical data distributions with similar variabilities.

Which tree diagram shows all of the possible outcomes for tossing a coin and rolling a fair number pyramid that has four sides labeled 1 through 4?

A

H   Coin toss

1   2   3   4   Roll of number pyramid

B

H   T   Coin toss

1   2   3   4   Roll of number pyramid

C

H   T   Coin toss

1   1   2   2   3   3   4   4   Roll of number pyramid

D

H   T   Coin toss

1   2   3   4   1   2   3   4   Roll of number pyramid

Key: D
Measured CCLS: 7.SP.8b

Commentary: This question measures 7.SP.8b because it assesses the student's ability to use tree diagrams to represent the outcomes in the sample space for a compound event described in everyday language.

Extended Rationale

Answer Choice A: This response is incorrect and may occur if a student does not discern that only one of the two possible outcomes for the coin toss was represented. A student who selects this response may have limited

An owner of a small store knows that in the last week 54 customers paid with cash, 42 paid with a debit card, and 153 paid with a credit card. Based on the number of customers from last week, which fraction is closest to the probability that the next customer will pay with cash?

A $\frac{1}{5}$

B $\frac{1}{4}$

C $\frac{1}{3}$

D $\frac{1}{2}$

Key: A
Measured CCLS: 7.SP.6

Commentary: This question measures 7.SP.6 because it assesses the student's ability to approximate the probability of a chance event based on data collected on the chance event.

Extended Rationale

Answer Choice A: "$\frac{1}{5}$"; This response shows the fraction that is closest to the probability that the next customer will pay with cash. The student may have used a method such as the one below.

$$\frac{54}{(54 + 42 + 153)} \approx 0.22 \approx \frac{1}{5}$$

A student who selects this response understands how to approximate the probability of a chance event based on data collected on the chance event.

Answer Choice B: "$\frac{1}{4}$"; This response is incorrect and may occur if a student does not include 54 in the total number of customers.

$$\frac{54}{(42 + 153)} \approx 0.28 \approx \frac{1}{4}$$

A student who selects this response may have limited understanding of how to approximate the probability of a chance event based on data collected on the chance event.

Answer Choice C: "$\frac{1}{3}$"; This response is incorrect and may occur if a student determines the three possible outcomes, "cash," "debit card," and "credit card," but then incorrectly assumes that all three outcomes are equally likely to occur. A student who selects this response may have limited understanding of how to approximate the probability of a chance event based on data collected on the chance event.

Answer Choice D: "$\frac{1}{2}$"; This response is incorrect and may occur if a student determines two possible outcomes, "cash" and "not cash," and then uses $P(\text{cash}) = \frac{1}{2}$ for the experimental probability. A student

Scientists determined that Antarctica's average winter temperature was -34.44°C. The difference between this temperature and Antarctica's highest recorded temperature was 49.44 degrees. What was Antarctica's highest recorded temperature?

A -83.88°C

B -15°C

C 15°C

D 83.88°C

Key: C
Measured CCLS: 7.NS.3

Commentary: This question measures 7.NS.3 because it assesses the student's ability to solve a real-world problem involving operations with rational numbers.

Extended Rationale

Answer Choice A: "-83.88°C"; This response is incorrect and may occur if a student makes an error in setting up the equation that relates the average temperature and the highest recorded temperature, subtracting 49.44 from 34.44.

$$-34.44°C - 49.44°C = -83.88°C$$

A student who selects this response may have limited understanding of how to solve real-world problems involving operations with rational numbers.

Answer Choice B: "-15°C"; This response is incorrect and may occur if a student makes an error in setting up the equation that relates the average temperature and the highest recorded temperature, using the number 34.44 instead of -34.44.

$$34.44°C - 49.44°C = -15°C$$

A student who selects this response may have limited understanding of how to solve real-world problems involving operations with rational numbers.

Answer Choice C: "15°C"; This answer represents Antarctica's highest recorded temperature. The student may have used an equation such as the one below.

$$-34.44 + 49.44 = 15$$

A student who selects this response understands how to solve real-world problems involving operations with rational numbers.

Answer Choice D: "83.88°C"; This response is incorrect and may occur if a student makes an error in setting up the equation that relates the average temperature and the highest recorded temperature, subtracting -34.44 from 49.44.

$$49.44°C - (-34.44°C) = 83.88°C$$

A student who selects this response may have limited understanding of how to solve real-world problems involving operations with rational numbers.

Answer choices A, B, and D are plausible but incorrect. They represent common student errors and misconceptions made when solving real-world problems involving operations with rational numbers.

The expression below was simplified using two properties of operations.

$$5(11z + 29 + 6z)$$

Step 1 $5(11z + 6z + 29)$

Step 2 $5(17z + 29)$

Step 3 $85z + 145$

Which properties were applied in Steps 1 and 3, respectively?

A   commutative property, then distributive property

B   commutative property, then identity property

C   associative property, then distributive property

D   associative property, then commutative property

Key: A
Measured CCLS: 7.EE.1

Commentary: This question measures 7.EE.1 because it assesses the student's ability to apply properties of operations as strategies used to add and expand linear expressions.

Extended Rationale

Answer Choice A: "commutative property, then distributive property"; This represents the properties that were applied in Steps 1 and 3, respectively. The student may have recognized that the commutative property was used in Step 1 because the terms 29 and 6z were rearranged within the parentheses. Then, the student may have recognized that the distributive property was used in Step 3 because terms in the parentheses were multiplied by 5. A student who selects this response understands how to recognize the properties of operations as strategies used to add and expand linear expressions.

Answer Choice B: "commutative property, then identity property"; This response is incorrect and may occur if a student does not recognize that the property applied to Step 3 was the distributive property, not the identity property. A student who selects this response may have limited understanding of how to recognize properties of operations as strategies used to add and expand linear expressions.

Answer Choice C: "associative property, then distributive property"; This response is incorrect and may occur if a student does not recognize that the property applied to Step 1 was the commutative property, not the associative property. The student may have assumed that the associative property was applied to Step 1, because the expression contains parentheses. A student who selects this response may have limited understanding of how to recognize properties of operations as strategies used to add and expand linear expressions.

Answer Choice D: "associative property, then commutative property"; This response is incorrect and may occur if a student does not recognize the properties applied to Steps 1 and 3. The student may have assumed that the associative property was applied to Step 1, because the expression contains parentheses. The student may have assumed that the commutative property was applied to Step 3, because the expression the

For her cell phone plan, Heather pays \$30 per month plus \$0.05 per text. She wants to keep her bill under \$60 per month. Which inequality represents the number of texts, t, Heather can send each month while staying within her budget?

A $t < 600$

B $t > 600$

C $t < 1,800$

D $t > 1,800$

Key: A
Measured CCLS: 7.EE.4b

Commentary: This question measures 7.EE.4b because it assesses the student's ability to solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers.

Extended Rationale

Answer Choice A: "$t < 600$"; This inequality correctly represents the number of texts, t, Heather can send each month while staying within her budget. The student may have written $0.05t + 30 < 60$ to model the situation and used a method such as the one below to solve the inequality.

$0.05t + 30 < 60$

$\quad 0.05t < 30$

$\quad\quad t < 600$

A student who selects this response understands how to solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers.

Answer Choice B: "$t > 600$"; This response is incorrect and may occur if a student uses the wrong inequality symbol, writing $0.05t + 30 > 60$ and solving as shown below.

$0.05t + 30 > 60$

$\quad 0.05t > 30$

$\quad\quad t > 600$

A student who selects this response may have limited understanding of how to model word problems involving inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers.

Answer Choice C: "$t < 1,800$"; This response is incorrect and may occur if a student misinterprets the \$30 monthly fee as being subtracted from the cost of the texts, leading to the inequality $0.05t - 30 < 60$.

$0.05t - 30 < 60$

$\quad 0.05t < 90$

$\quad\quad t < 1,800$

A student who selects this response may have limited understanding of how to model word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers.

Solve for x.

$$0.5x + 78.2 = 287$$

A $x = 104.4$

B $x = 417.6$

C $x = 495.8$

D $x = 730.4$

Key: B
Measured CCLS: 7.EE.4a

Commentary: This question measures 7.EE.4a because it assesses the student's ability to fluently solve an equation of the form $px + q = r$, where p, q, and r are specific rational numbers.

Extended Rationale

Answer Choice A: "$x = 104.4$"; This response is incorrect and may occur if a student multiplies 208.8 by 0.5, instead of dividing, when transforming the equation.

$$0.5x + 78.2 = 287$$
$$0.5x = 208.8$$
$$\downarrow$$
$$x = (0.5)208.8$$
$$x = 104.4$$

A student who selects this response may be unable to fluently solve equations of the form $px + q = r$, where p, q, and r are specific rational numbers.

Answer Choice B: "$x = 417.6$"; This answer represents the correct value of x that makes the given equation true. The student may have used a method such as the one below.

$$0.5x + 78.2 = 287$$
$$0.5x = 208.8$$
$$x = 417.6$$

A student who selects this response understands how to fluently solve equations of the form $px + q = r$, where p, q, and r are specific rational numbers.

Katie bought 4 sweaters that each cost the same amount and 1 skirt that cost $20. The items she bought cost a total of $160 before tax was added. What was the cost of each sweater?

A $20

B $35

C $40

D $45

Key: B
Measured CCLS: 7.EE.4a

Commentary: This question measures 7.EE.4a because it measures the ability to solve a word problem leading to an equation of the form $px + q = r$, where p, q, and r are specific rational numbers. In this case the situation leads to the equation $4x + 20 = 160$, where x represents the cost of each sweater.

Extended Rationale

Answer Choice A: "$20"; This response is incorrect and may occur when a student incorrectly uses the equation $4x = 160$ to represent the situation, neglecting to account for the cost of the skirt. The student may have also thought that since 2 types of products were bought (sweaters and a skirt), the solution to the equation needed to be divided by 2.

$$4x = 160$$

$$x = 40$$

$$40 \div 2 = 20$$

A student who selects this response may not yet understand how an equation in the form of $px + q = r$ can be used to solve a word problem.

Answer Choice B: "$35"; This response represents the correct cost of each sweater, $35, which results from solving the equation $4x + 20 = 160$. The student who selects this response understands how to solve the given word problem.

$$4x + 20 = 160$$

$$4x = 140$$

$$x = 35$$

Answer Choice C: "$40"; This response is incorrect and may occur when a student incorrectly uses the equation $4x = 160$ to represent the situation, neglecting to account for the cost of the skirt.

$$4x = 160$$

$$x = 40$$

A student who selects this response may not yet understand how an equation in the form of $px + q = r$ can be used to solve a word problem.

Jocelyn was shopping at a farmers' market. She observed the prices of cucumbers at several stands. Which sign shows a proportional relationship in the pricing of the cucumbers?

A

Joe's Stand

5 cucumbers for $2.50
10 cucumbers for $4.00
15 cucumbers for $5.50
20 cucumbers for $7.00

C

Betty's Stand

5 cucumbers for $2.00
10 cucumbers for $4.00
15 cucumbers for $6.00
20 cucumbers for $8.00

B

Steve's Stand

5 cucumbers for $2.50
10 cucumbers for $4.50
15 cucumbers for $6.50
20 cucumbers for $8.50

D

Lula's Stand

5 cucumbers for $1.50
10 cucumbers for $3.00
15 cucumbers for $6.00
20 cucumbers for $12.00

Key: C
Measured CCLS: 7.RP.2a

Commentary: This question measures 7.RP.2a because it assesses the student's ability to decide whether two quantities are in a proportional relationship.

Extended Rationale

Answer Choice A: This response is incorrect and may occur if a student observes that the prices increased consistently by $1.50 as the number of cucumbers increased in increments of 5, but does not compare the cost per cucumber for each row.

2.50 (+ 1.50) = 4.00
4.00 (+ 1.50) = 5.50
5.50 (+ 1.50) = 7.00

Doug earns $10.50 per hour working at a restaurant. On Friday he spent $1\frac{3}{4}$ hours cleaning, $2\frac{1}{3}$ hours doing paperwork, and $1\frac{5}{12}$ hours serving customers. What were Doug's earnings?

A $46.97

B $47.25

C $53.00

D $57.75

Key: D
Measured CCLS: 7.EE.3

Commentary: This question measures 7.EE.3 because it assesses the student's ability to solve a multi-step real-life problem posed with positive rational numbers by applying properties of operations to calculate with numbers in any form and convert between forms as appropriate.

Extended Rationale

Answer Choice A: "$46.97"; This response is incorrect and may occur if a student makes a computational error in adding fractions while determining the total number of hours that Doug worked.

$$\$10.50\left(1\frac{3}{4} + 2\frac{1}{3} + 1\frac{5}{12}\right) \rightarrow \$10.50\left(4\frac{9}{19}\right)$$

$$\$10.50\left(4\frac{9}{19}\right) \approx \$46.97$$

A student who selects this response may have limited understanding of how to solve multi-step real-life problems that require calculations with positive rational numbers presented in any form.

Answer Choice B: "$47.25"; This response is incorrect and may occur if a student makes a computational error in adding fractions while determining the total number of hours that Doug worked.

$$\$10.50\left(1\frac{3}{4} + 2\frac{1}{3} + 1\frac{5}{12}\right) \rightarrow \$10.50\left(4\frac{1}{2}\right)$$

$$\$10.50\left(4\frac{1}{2}\right) = \$47.25$$

A student who selects this response may have limited understanding of how to solve multi-step real-life problems that require calculations with positive rational numbers presented in any form.

Answer Choice C: "$53.00"; This response is incorrect and may occur if a student makes an error when determining Doug's earnings, not applying the distributive property when necessary.
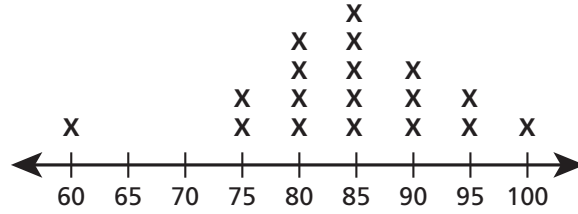
$$\$10.50\left(1\frac{3}{4} + 2\frac{1}{3} + 1\frac{5}{12}\right) =$$

$$\$10.50(5.5) \rightarrow \$10.50(5) + \$0.50$$

$$\$10.50(5) + \$0.50 = \$53.00$$

The test scores of the students in Mr. Duffy's class are shown on the line plot below.
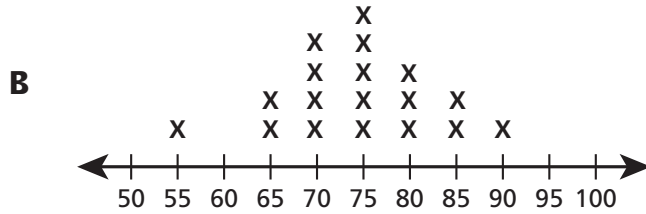
MR. DUFFY'S CLASS

Most of the students in Ms. Guzman's class scored higher than most of the students in Mr. Duffy's class on the same test. Which line plot could represent the test scores of the students in Ms. Guzman's class?
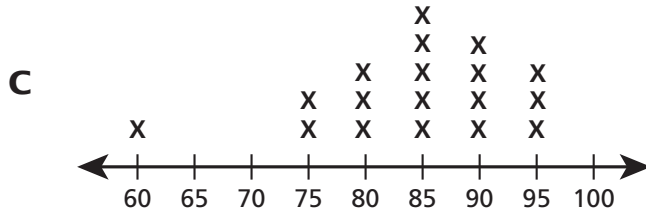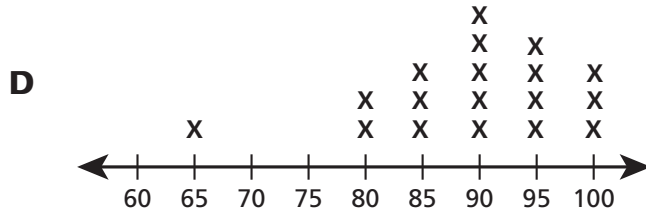
A

MS. GUZMAN'S CLASS

B

MS. GUZMAN'S CLASS

C

MS. GUZMAN'S CLASS

D
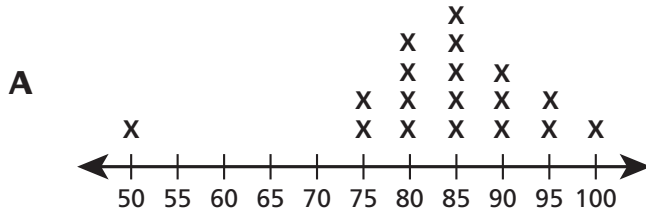
MS. GUZMAN'S CLASS

A store sold 650 bicycles last year. This year the store sold 572 bicycles. What is the percent decrease in the number of bicycles sold from last year to this year?

A   12%

B   14%

C   78%

D   88%

Key: A
Measured CCLS: 7.RP.3

Commentary: This question measures 7.RP.3 because it assesses the student's ability to use a proportional relationship to solve a multistep percent problem.

Extended Rationale

Answer Choice A: "12%"; This response shows the correct percent decrease in the number of bicycles sold from last year to this year. The student may have used a method such as one of those below.

Method 1: $\dfrac{(650 - 572)}{650} \times 100 = 12\%$

Method 2: $650 - 572 = 78$

$\dfrac{78}{650} \times 100 = 12\%$

A student who selects this response understands how to use proportional relationships to solve multistep percent problems.

Answer Choice B: "14%"; This response is incorrect and may occur if a student divides the change in the number of bicycles sold by 572.
$\dfrac{(650 - 572)}{572} \times 100 \approx 14\%$

A student who selects this response may have limited understanding of how to use proportional relationships to solve multistep percent problems.

Answer Choice C: "78%"; This response is incorrect and may occur if a student finds the change in the number of bicycles sold and erroneously labels number as a percent.
$650 - 572 = 78$

A student who selects this response may have limited understanding of how to use proportional relationships to solve multistep percent problems.

Answer Choice D: "88%"; This response is incorrect and may occur if a student finds the percent of 650 represented by 572.
$\dfrac{572}{650} \times 100 = 88\%$

Sammy drew a rectangle that was w inches wide. The expression $2(2w) + 2(w)$ represents the perimeter of the rectangle that Sammy drew. Which statement relates the perimeter to the width of the rectangle?

A   The perimeter is 6 inches more than the width.

B   The perimeter is 6 times the width.

C   The perimeter is 2 inches more than the width.

D   The perimeter is 2 times the width.

Key: B
Measured CCLS: 7.EE.2

Commentary: This question measures 7.EE.2 because it assesses the student's ability to understand how different forms of an expression in a problem context can shed light on how the quantities are related.

Extended Rationale

Answer Choice A: "The perimeter is 6 inches more than the width." This response is incorrect and may occur if a student misinterprets the meaning of $6w$ as "six more than w."

$$2(2w) + 2(w) =$$
$$4w + 2w =$$
$$6w =$$

A student who selects this response may have limited understanding of how to rewrite an expression in different forms in order to shed light on the problem and correctly interpret how the quantities in it are related.

Answer Choice B: "The perimeter is 6 times the width." This statement correctly relates the perimeter to the width of the rectangle. The student may have used a method such as the one below.

$$2(2w) + 2(w) =$$
$$4w + 2w =$$
$$6w =$$

A student who selects this response understands that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.

Answer Choice C: "The perimeter is 2 inches more than the width." This response is incorrect and may occur if a student compares the length and width of the rectangle, instead of the perimeter and the width, and then misinterprets the result as "2 inches more than the width."

$$\frac{2w}{w} = 2$$

A student who selects this response may have a limited understanding of how to rewrite an expression in different forms in a problem context in order to shed light on the problem and correctly interpret how the quantities in it are related.

Answer Choice D: "The perimeter is 2 times the width." This response is incorrect and may occur if a student compares the length and width of the rectangle, instead of the perimeter and the width.

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Sally has a discount card that reduces the price of her grocery bill in a certain grocery store by 5%. If c represents the cost of Sally's groceries, which expression represents Sally's grocery bill?

A $0.05c$

B $0.95c$

C $c - 0.05$

D $c + 0.95$

Key: B
Measured CCLS: 7.EE.2

Commentary: This question measures 7.EE.2 because it assesses the student's ability to rewrite an expression in a different form in a problem context in order to show how the quantities in it are related.

Extended Rationale

Answer Choice A: "$0.05c$"; This response is incorrect and may occur if a student writes an expression for the amount of the discount instead of the amount of the bill after the discount. A student who selects this response may have limited understanding of how to rewrite an expression in different forms in a problem context in order to show how the quantities in it are related.

Answer Choice B: "$0.95c$"; This expression correctly represents Sally's grocery bill. The student may have used a method such as the one below.
$c(1 - 0.05) = 0.95c$

A student who selects this response understands how to rewrite an expression in different forms in a problem context in order to show how the quantities in it are related.

Answer Choice C: "$c - 0.05$"; This response is incorrect and may occur if a student does not understand that the discount was 5% of c, the total cost of the groceries not subtracting 0.05 from c. A student who selects this response may have limited understanding of how to rewrite an expression in different forms in a problem context in order to show how the quantities in it are related.

Answer Choice D: "$c + 0.95$."; This response is incorrect and may occur if a student does not understand that the amount of the bill after the discount was 95% of c, the total cost of the groceries not adding 0.95 to c. A student who selects this response may have limited understanding of how to rewrite an expression in different forms in a problem context in order to show how the quantities in it are related.

Answer choices A, C, and D are plausible but incorrect. They represent common student errors and misconceptions made when rewriting an expression in order to show how the quantities in it are related.

The cost of oranges in a grocery store is directly proportional to the number of oranges purchased. Jerri paid $2.52 for 6 oranges. If p represents the cost, in dollars, and n represents the number of oranges purchased, which equation best represents this relationship?

A $p = 0.42n$

B $p = 2.52n$

C $p = 6n$

D $p = 15.12n$

Key: A
Measured CCLS: 7.RP.2c

Commentary: This question measures 7.RP.2c because it assesses the student's ability to represent a proportional relationship by an equation.

Extended Rationale

Answer Choice A: "$p = 0.42n$"; This equation correctly represents the relationship between p, the cost, in dollars, of oranges at the grocery store, and n, the number of oranges purchased. The student may have used a method such as the one below to determine the unit rate and then set up the appropriate equation using this value.

$$\frac{\$2.52}{6 \text{ oranges}} = \$0.42 \text{ / orange}$$

A student who selects this response understands how to represent proportional relationships by equations.

Answer Choice B: "$p = 2.52n$"; This response is incorrect and may occur if a student interprets the total amount paid for the 6 oranges as the unit rate and then sets up an equation using this value. A student who selects this response may have limited understanding of how to represent proportional relationships by equations.

Answer Choice C: "$p = 6n$"; This response is incorrect and may occur if a student interprets the total number of oranges as the unit rate and then sets up an equation using this value. A student who selects this response may have limited understanding of how to represent proportional relationships by equations.

Answer Choice D: "$p = 15.12n$"; This response is incorrect and may occur if a student multiplies 2.52, the total cost of the oranges, by 6, the total number of oranges, to determine the unit rate, and then sets up an equation using this value.

$$2.52 \times 6 = 15.12$$

A student who selects this response may have limited understanding of how to represent proportional relationships by equations.

Answer choices B, C, and D are plausible but incorrect. They represent common student errors and misconceptions made when representing proportional relationships by equations.

The scale of a model train is 1 inch to 13.5 feet. One of the cars of the model train is 5 inches long. What is the length, in feet, of the actual train car?

A 67.5

B 32.4

C 14.5

D 2.7

Key: A
Measured CCLS: 7.G.1

Commentary: This question measures 7.G.1 because it assesses the student's ability to solve a problem involving the computation of actual lengths of an object based on the scale of a model.

Extended Rationale

Answer Choice A: "67.5"; This answer represents the correct length, in feet, of the actual train car. The student may have used a method such as the one below.

$$5 \text{ in.} \times \frac{13.5 \text{ ft}}{1 \text{ in.}} = 67.5 \text{ ft}$$

A student who selects this response understands how to solve problems involving the computation of actual lengths of an object based on the scale of a model.

Answer Choice B: "32.4"; This response is incorrect and may occur if a student makes an error when setting up an equation to solve the problem and attempts to use the conversion factor $12 \text{ in.} = 1 \text{ ft}$. One possible incorrect equation is shown below.

$$\frac{5}{12} = \frac{13.5}{x}$$

$$5x = 162$$

$$x = 32.4$$

A student who selects this response may have limited understanding of how to solve problems involving the computation of actual lengths of an object based on the scale of a model.

Answer Choice C: "14.5"; This response is incorrect and may occur if a student makes an error interpreting the scale of the drawing, "1 inch to 13.5 feet." The student may have interpreted this as $1 \text{ in.} + 13.5 \text{ ft} = 14.5 \text{ ft}$ and concluded that "14.5" is the answer. A student who selects this response may have limited understanding of how to solve problems involving the computation of actual lengths of an object based on the scale of a model.

Answer Choice D: "2.7"; This response is incorrect and may occur if a student makes an error when setting up an equation to solve the problem. One possible incorrect equation is shown below.

$$\frac{1}{5} = \frac{x}{13.5}$$

$$5x = 13.5$$

$$x = 2.7$$

Charis invested $140. She earned a simple interest of 3% per year on the initial investment. If no money was added or removed from the investment, what was the amount of interest Charis received at the end of two years?

A $4.20

B $6.00

C $8.40

D $12.60

Key: C
Measured CCLS: 7.RP.3

Commentary: This question measures 7.RP.3 because it assesses the student's ability to use proportional relationships to solve a multistep percent problem.

Extended Rationale

Answer Choice A: "$4.20"; This response is incorrect and may occur if a student finds the interest Charis would have received at the end of one year.

$140 \times 0.03 = \$4.20$

A student who selects this response may have limited understanding of how to solve a multistep percent problem.

Answer Choice B: "$6.00"; This response is incorrect and may occur if a student misinterprets 3% of $140 as a payment of $3.00 in interest every year.

$3.00 \times 2 = \$6.00$

A student who selects this response may have limited understanding of how to use proportional relationships to solve a multistep percent problem.

Answer Choice C: "$8.40"; This response correctly shows the amount of interest Charis received at the end of two years. The student may have used a method such as the one below.

$140 \times 0.03 \times 2 = \$8.40$

A student who selects this response understands how to use proportional relationships to solve a multistep percent problem.

Answer Choice D: "$12.60"; This response is incorrect and may occur if a student multiplies $140 by 3, and then determines 3% of the product.

$140 \times 3 \times 0.03 = \$12.60$

A student who selects this response may have limited understanding of how to use proportional relationships to solve a multistep percent problem.

Answer choices A, B, and D are plausible but incorrect. They represent common student errors and misconceptions made when using proportional relationships to solve a multistep percent problem.

Which expression is equivalent to $4.8 + 2.2w - 1.4w + 2.4\,$?

A $0.4(6 + 2w)$

B $0.8(9 + w)$

C $1.6(3 + 2w)$

D $3.6(2 + w)$

Key: B
Measured CCLS: 7.EE.1

Commentary: This question measures 7.EE.1 because it assesses the student's ability to apply properties of operations to add, subtract, and factor linear expressions with rational coefficients.

Extended Rationale

Answer Choice A: "$0.4(6 + 2w)$"; This response is incorrect and may occur if a student makes an error when combining like terms.

$4.8 + 2.2w - 1.4w + 2.4 \rightarrow (4.8 - 2.4) + 0.8w$

$(4.8 - 2.4) + 0.8w = 2.4 + 0.8w = 0.4(6 + 2w)$

A student who selects this response may have limited understanding of how to apply properties of operations to add, subtract, and factor linear expressions with rational coefficients.

Answer Choice B: "$0.8(9 + w)$"; This represents an expression that is equivalent to the given expression. The student may have used a method such as the one below.

$4.8 + 2.2w - 1.4w + 2.4 = 7.2 + 0.8w = 0.8(9 + w)$

A student who selects this response understands how to apply properties of operations to add, subtract, and factor linear expressions with rational coefficients.

Answer Choice C: "$1.6(3 + 2w)$"; This response is incorrect and may occur if a student makes an error when combining like terms.

$4.8 + 2.2w - 1.4w + 2.4 \rightarrow 4.8 + (2.2 - 1.4 + 2.4)w$

$4.8 + (2.2 - 1.4 + 2.4)w = 4.8 + 3.2w = 1.6(3 + 2w)$

A student who selects this response may have limited understanding of how to apply properties of operations to add, subtract, and factor linear expressions with rational coefficients.

Answer Choice D: "$3.6(2 + w)$"; This response is incorrect and may occur if a student makes an error when combining like terms.

$4.8 + 2.2w - 1.4w + 2.4 \rightarrow 7.2 + (2.2w + 1.4w)$

$7.2 + (2.2w + 1.4w) = 7.2 + 3.6w = 3.6(2 + w)$

A student who selects this response may have limited understanding of how to apply properties of operations to add, subtract, and factor linear expressions with rational coefficients.

A storeowner made a list of the number of greeting cards sold last month. The store sold 167 thank-you cards, 285 birthday cards, and 56 blank cards. Based on these data, which number is closest to the probability that the next customer will buy a blank card?

A 0.11

B 0.33

C 0.56

D 0.89

Key: A
Measured CCLS: 7.SP.6

Commentary: This question measures 7.SP.6 because it assesses the student's ability to approximate the probability of a chance event by using data on the chance process that produces it and observing its long-run relative frequency. In this case the student must use data about numbers of different card types (thank-you, birthday, and blank) sold last month to approximate the probability that a customer will choose a blank card.

Extended Rationale

Answer Choice A: "0.11"; This response represents the correct probability that the next customer will buy a blank card. The student may have added all of the cards sold in the last month and then divided the number of blank cards sold by the total to calculate the probability.

$167 + 285 + 56 = 508$

$$\frac{56}{508} \simeq 0.11$$

A student who selects this response has an understanding of how to approximate the probability of a chance event.

Answer Choice B: "0.33"; This response is incorrect and may occur when the student adds all of the cards sold in the last month and then divides the number of thank-you cards sold by the total.

$167 + 285 + 56 = 508$

$$\frac{167}{508} \simeq 0.33$$

A student who selects this response may have a limited understanding of how to approximate the probability of a chance event.

Answer Choice C: "0.56"; This response is incorrect and may occur when the student adds all of the cards sold in the last month and then divides the number of birthday cards sold by the total.

$167 + 285 + 56 = 508$

$$\frac{285}{508} \simeq 0.56$$

A student who selects this response may have a limited understanding of how to approximate the probability of a chance event.

Bananas cost \$0.45 per pound. What equation is used to find C, the total cost of p pounds of bananas?

A $C = 0.45p$

B $C = p + 0.45$

C $0.45C = p$

D $0.45 + C = p$

Key: A
Measured CCLS: 7.RP.2c

Commentary: This question measures 7.RP.2c because it assesses the student's ability to represent a proportional relationship by an equation.

Extended Rationale

Answer Choice A: "$C = 0.45p$"; This answer represents the correct equation used to find C, the total cost of p pounds of bananas. The student may have recognized that the unit price of \$0.45 per pound, was the constant of proportionality, and that the number of pounds of bananas, p, was the independent variable. A student who selects this response understands how to represent proportional relationships by equations.

Answer Choice B: "$C = p + 0.45$"; This response is incorrect and may occur if a student assumes that addition should be used in the equation, since each pound adds \$0.45 to the cost. A student who selects this response may have limited understanding of how to represent proportional relationships by equations.

Answer Choice C: "$0.45C = p$"; This response is incorrect and may occur if a student reverses the variables used to represent the cost and the number of pounds of bananas. A student who selects this response may have limited understanding of how to represent proportional relationships by equations.

Answer Choice D: "$0.45 + C = p$"; This response is incorrect and may occur if a student assumes that addition should be used in the equation, since each pound adds \$0.45 to the cost, and also misinterprets C as the independent variable. A student who selects this response may have limited understanding of how to represent proportional relationships by equations.

Answer choices B, C, and D are plausible but incorrect. They represent common student errors and misconceptions made when representing proportional relationships by equations.

A store purchased a DVD for $12.00 and sold it to a customer for 50% more than the purchase price. The customer was charged a 7% tax when the DVD was sold. What was the customer's total cost for the DVD?

A $12.84

B $18.42

C $18.84

D $19.26

Key: D
Measured CCLS: 7.RP.3

Commentary: This question measures 7.RP.3 because it assesses the student's ability to interpret and use proportional relationships to solve a multistep percent problem.

Extended Rationale

Answer Choice A: "$12.84"; This response is incorrect and may occur if a student finds the total cost of $12.00 plus 7% sales tax.

$12.00 \times (1 + 0.07) = \$12.84$

A student who selects this response may have limited understanding of how to interpret and use proportional relationships to solve multistep percent problems.

Answer Choice B: "$18.42"; This response is incorrect and may occur if a student includes the 7% sales tax on the 50% increase only and then adds the result to the original $12.00.

$12.00 \times 0.5 = \$6.00$
$6.00 \times (1 + 0.07) = \$6.42$
$12.00 + \$6.42 = \$18.42$

A student who selects this response may have limited understanding of how to interpret and use proportional relationships to solve multistep percent problems.

Answer Choice C: "$18.84"; This response is incorrect and may occur if a student applies both percents as an increase on the original $12.00.

$12.00 \times (1 + 0.5 + 0.07) = \$18.84$

A student who selects this response may have limited understanding of how to interpret and use proportional relationships to solve multistep percent problems.

Answer Choice D: "$19.26"; This response represents the correct total cost of the DVD. The student may have used a method such as one of those below.

Method 1: $12.00 \times 0.5 = \$6.00$
              $(\$12.00 + \$6.00) \times 0.07 = \$1.26$
              $18.00 + \$1.26 = \$19.26$

To select a new school mascot, 20 randomly selected students in each grade were asked to choose between the two finalists: tiger and eagle. The results are shown below.

PREFERRED MASCOT

Grade	Tiger	Eagle
5	14	6
6	13	7
7	8	12
8	5	15

Which statement is **best** supported by the results?

A   The preferred mascot is a tiger.

B   The preferred mascot is an eagle.

C   Fifth and sixth grade students at the school preferred an eagle mascot.

D   Seventh and eighth grade students at the school preferred an eagle mascot.

Key: D
Measured CCLS: 7.SP.2

Commentary: This question measures 7.SP.2 because it assesses the student's ability to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Extended Rationale

Answer Choice A: "The preferred mascot is a tiger." This response is incorrect and may occur if a student only considers the data in the top two rows, where the greatest number of votes in both grades 5 and 6 was for the tiger mascot. A student who selects this response may have limited understanding of how to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Answer Choice B: "The preferred mascot is an eagle." This response is incorrect and may occur if a student only considers the data in the bottom two rows, where the greatest number of votes in both grades 7 and 8 was for the eagle mascot. A student who selects this response may have limited understanding of how to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Answer Choice C: "Fifth and sixth grade students at the school preferred an eagle mascot." This response is incorrect and may occur if a student makes an error when interpreting the data in the top two rows, where the greatest number of votes in both grades 5 and 6 was for the tigers. A student who selects this response may have limited understanding of how to use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

Graham's monthly bank statement showed the following deposits and withdrawals:

$$-\$25.20, \ \$52.75, \ -\$22.04, \ -\$8.50, \ \$94.11$$

If Graham's balance in the account was $47.86 at the beginning of the month, what was the account balance at the end of the month?

Show your work.

Answer $_____

The circumference of a circle is 11π inches.

What is the area, in square inches, of the circle? Express your answer in terms of π.

Show your work.

Answer _____ square inches

Convert $\frac{3}{11}$ to a decimal equivalent using long division.

Show your work.

Answer _____

2014 NYS GRADE 7 - MATH ANNOTATED TEST QUESTIONS
Statewide Results

Multiple Choice Analysis

Question Number	Question Identification Number	Standard	Percentage of Students Who Answered Correctly (P-Value)	Total Possible Points
02	124070037	CCSS.Math.Content.7.EE.B.4b	0.71	1
03	134070039	CCSS.Math.Content.7.RP.A.1	0.73	1
05	124070026	CCSS.Math.Content.7.EE.A.1	0.44	1
07	124070012	CCSS.Math.Content.7.RP.A.3	0.39	1
11	124070507	CCSS.Math.Content.7.NS.A.3	0.55	1
12	124070607	CCSS.Math.Content.7.EE.A.2	0.28	1
15	134070034	CCSS.Math.Content.7.SP.A.2	0.38	1
17	134070037	CCSS.Math.Content.7.RP.A.1	0.55	1
18	134070087	CCSS.Math.Content.7.SP.B.3	0.70	1
22	134070422	CCSS.Math.Content.7.SP.C.8b	0.74	1
23	134070417	CCSS.Math.Content.7.SP.C.6	0.33	1
25	134070074	CCSS.Math.Content.7.NS.A.3	0.49	1
26	134070083	CCSS.Math.Content.7.EE.A.1	0.45	1
27	134070406	CCSS.Math.Content.7.EE.B.4b	0.56	1
28	134070001	CCSS.Math.Content.7.EE.B.4a	0.51	1
30	124070036	CCSS.Math.Content.7.EE.B.4a	0.80	1
32	134070041	CCSS.Math.Content.7.RP.A.2a	0.74	1
33	134070015	CCSS.Math.Content.7.EE.B.3	0.58	1
35	134060098	CCSS.Math.Content.6.SP.A.2	0.82	1
36	134070060	CCSS.Math.Content.7.RP.A.3	0.40	1
37	134070086	CCSS.Math.Content.7.EE.A.2	0.36	1
40	134070405	CCSS.Math.Content.7.EE.A.2	0.22	1
41	124070603	CCSS.Math.Content.7.RP.A.2c	0.46	1
44	134070022	CCSS.Math.Content.7.G.A.1	0.79	1
45	134070057	CCSS.Math.Content.7.RP.A.3	0.51	1
46	134070082	CCSS.Math.Content.7.EE.A.1	0.54	1
47	134070099	CCSS.Math.Content.7.SP.C.6	0.53	1
52	134070044	CCSS.Math.Content.7.RP.A.2c	0.75	1
54	134070054	CCSS.Math.Content.7.RP.A.3	0.51	1
55	134070035	CCSS.Math.Content.7.SP.A.2	0.80	1

Constructed Response Analysis

Question Number	Question Identification Number	Standard	Average Points Earned	Total Possible Points	P-Value (Average Points Earned ÷ Total Possible Points)
56	134070502	CCSS.Math.Content.7.NS.A.1d	1.32	2	0.66
57	134070107	CCSS.Math.Content.7.RP.A.3	1.12	2	0.56
58	134070508	CCSS.Math.Content.7.G.B.4	0.58	2	0.29
61	134070503	CCSS.Math.Content.7.NS.A.2d	1.00	2	0.50
62	124070209	CCSS.Math.Content.7.EE.B.3	0.84	3	0.28
64	134070205	CCSS.Math.Content.7.RP.A.3	0.84	3	0.28
65	134070202	CCSS.Math.Content.7.EE.B.4a	1.65	3	0.55