STAAR Items in A Box

8.3C – 3 (R)   thirteen X

29 A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If (x, y) represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

A $(20x, 20y)$

B $(0.4x, 0.4y)$

C $(x + 20, y + 20)$
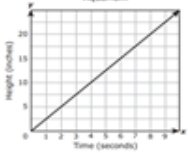
D $(x + 0.4, y + 0.4)$

1

STAAR 2016

8.4B – 2 (R)   fourteen Z

5 An aquarium is being filled with water. The graph shows the height of the water over time as the aquarium is being filled.

Aquarium

Which statement best describes the rate of change for this situation?

A The height of the water increases 20 inches per second.

B The height of the water increases 1 inch per second.

C The height of the water increases 5 inches per second.

D The height of the water increases 2.5 inches per second.

2

3

thirteen X

8.3C – 3 (R)

STAAR 2018

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STAAR Items in A Box

1

8.3C – 3 (R)   thirteen X

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2

STAAR 2016

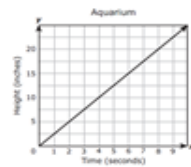8.4B – 2 (R)   fourteen Z

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STAAR 2018

8.3C – 3 (R)

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STAAR Items in A Box

8.3C – 3 (R)   thirteen X

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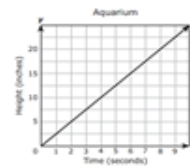
1

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B $(0.4x, 0.4y)$

C $(x + 20, y + 20)$

D $(x + 0.4, y + 0.4)$

15 The table shows the amount of time four students practiced the trumpet one day.

Trumpet Practice Times

Name	Time (hours)
Cole	$1\frac{2}{3}$
Gus	$1\frac{1}{2}$
Ryan	$1\frac{1}{4}$
Jacob	$1\frac{7}{12}$

Which list shows the names of the students in order from the least amount of practice time to the greatest amount of practice time?

A Ryan, Jacob, Cole, Gus

B Cole, Jacob, Gus, Ryan

C Ryan, Gus, Jacob, Cole

D Gus, Ryan, Cole, Jacob

45 Students in Mrs. Guerro's class must complete at least 40 math problems for homework every week. The table shows the progress of four students on Wednesday.

Homework Progress

Student	Amount Completed
Katie	0.4
D'Angelo	$\dfrac{45}{40}$
Grace	100%
Jonah	$\dfrac{2}{3}$

Which list shows the amounts of homework completed in order from greatest to least?

A 0.4, $\dfrac{2}{3}$, $\dfrac{45}{40}$, 100%

B $\dfrac{45}{40}$, 100%, $\dfrac{2}{3}$, 0.4

C 0.4, $\dfrac{2}{3}$, 100%, $\dfrac{45}{40}$

D $\dfrac{2}{3}$, 0.4, $\dfrac{45}{40}$, 100%

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

   A −10°F 8°F −5°F 0°F

   B −5°F −10°F 0°F 8°F

   C −10°F −5°F 0°F 8°F

   D 0°F −5°F 8°F −10°F

20 Elida will use six different wires for a science project. The fractions represent the diameters of these wires in inches.

$$\frac{7}{16}, \quad \frac{1}{2}, \quad \frac{3}{8}, \quad \frac{9}{32}, \quad \frac{5}{16}, \quad \frac{15}{32}$$

Which list shows the diameters of the wires in order from least to greatest?

F $\quad \frac{1}{2}, \quad \frac{3}{8}, \quad \frac{7}{16}, \quad \frac{5}{16}, \quad \frac{15}{32}, \quad \frac{9}{32}$

G $\quad \frac{9}{32}, \quad \frac{15}{32}, \quad \frac{5}{16}, \quad \frac{7}{16}, \quad \frac{3}{8}, \quad \frac{1}{2}$

H $\quad \frac{1}{2}, \quad \frac{3}{8}, \quad \frac{5}{16}, \quad \frac{7}{16}, \quad \frac{9}{32}, \quad \frac{15}{32}$

J $\quad \frac{9}{32}, \quad \frac{5}{16}, \quad \frac{3}{8}, \quad \frac{7}{16}, \quad \frac{15}{32}, \quad \frac{1}{2}$

6.2D – 1 (R) four W

14 The table shows the portion of a day four students used to build a website.

Time Used

Student	Portion of Day
Jamail	29.4%
Andrew	37.6%
Ernesto	$\frac{7}{25}$
Blake	$\frac{3}{10}$

Which list shows the students in order from the greatest amount of time used to the least amount of time used?

F   Andrew, Blake, Jamail, Ernesto

G   Blake, Andrew, Jamail, Ernesto

H   Ernesto, Blake, Andrew, Jamail

J   Andrew, Jamail, Ernesto, Blake

30 Which list shows the numbers in order from least value to greatest value?

F $-\dfrac{2}{5}$ -2.47 $-2\dfrac{1}{2}$ 5 $\dfrac{21}{4}$

G $-\dfrac{2}{5}$ -2.47 $-2\dfrac{1}{2}$ $\dfrac{21}{4}$ 5

H $-2\dfrac{1}{2}$ -2.47 $-\dfrac{2}{5}$ 5 $\dfrac{21}{4}$

J $-2\dfrac{1}{2}$ -2.47 $-\dfrac{2}{5}$ $\dfrac{21}{4}$ 5

12 A team of four players competed in a golf contest. The names and scores of the players on the team are shown in the table. The team's score is the sum of all the scores in the table.

Golf Scores

Player	Score
Brett	−2
Elliott	+3
Lin	−4
Tyrone	−1

What is the team's score?

F 10

G −10

H −4

J Not here

30 A teacher wrote this expression on the board.

$$(-6)(2) + (-8 \div 4)$$

What is the value of this expression?

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

Grades 6–8 Mathematics

25 Which expression has a value of -22?

A $8 - (-3) + 33 \div (-3)$

B $-3 + (-2) - (-8) - 1$

C $-6 \cdot 2 - (-15)$

D $-5 \cdot 2 - 12$

1 Serena bought 5 shirts for $6 each and spent $7 on lunch. She paid for the shirts and lunch using her debit card. The change in the balance of Serena's checking account can be represented by the expression shown.

$$5(-6) + (-7)$$

Which integer represents the change in the balance of Serena's checking account from these purchases?

A −37

B 23

C −18

D 4

33 LuAnn is playing a math game. She chooses three cards. The value of each of her cards is shown.

- First card: −12
- Second card: 3
- Third card: −5

What is the sum of the values of LuAnn's three cards?

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

Grades 6–8 Mathematics
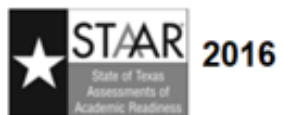
2 A baby weighed 7.25 lb at birth. At the end of 8 months, the baby weighed $2\frac{1}{2}$ times its birth weight. How many pounds did the baby weigh at the end of 8 months?

F 14.5 lb

G 9.75 lb

H 18.125 lb

J 14.125 lb

38 A recipe for cookies requires $\frac{2}{3}$ cup of butter. Rama wants to make $\frac{3}{4}$ of the recipe. How many cups of butter should Rama use to make the cookies?

F $1\frac{5}{12}$ c

G $\frac{8}{9}$ c

H $\frac{1}{12}$ c

J $\frac{1}{2}$ c

6 A team of workers took 167.3 hours to complete a task. A smaller team of workers will complete the same task, but it will take them 1.25 times as long as it took the first team.

Based on this information, which statement is true?

F The task will take the smaller team of workers 168.55 hours to complete, because $167.3 + 1.25 = 168.55$.

G The task will take the smaller team of workers 179.8 hours to complete, because $167.3 + 1.25 = 179.8$.

H The task will take the smaller team of workers 198.825 hours to complete, because $167.3 \times 1.25 = 198.825$.

J The task will take the smaller team of workers 209.125 hours to complete, because $167.3 \times 1.25 = 209.125$.

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STAAR
State of Texas
Assessments of
Academic Readiness

2018

6.3E – 2 (R)   **eight Z**

18 A pharmacist put 4.536 ounces of vitamin pills into bottles. She put 0.042 ounce of vitamin pills into each bottle.

How many bottles did the pharmacist use for these vitamin pills?

F 11

G 5

H 18

J 108

4 A barrel contained 60 gallons of water. Water leaked out of the barrel at a rate of 5 gallons every 3 days.

At this rate, how many days did it take for all 60 gallons of water to leak out of the barrel?

F 20 days

G 12 days

H 100 days

J 36 days

STAAR 2016
State of Texas
Assessments of
Academic Readiness

6.4B – 2 (R)

twelve W

40 Aiden asked a group of students to choose their favorite type of music from the choices of rock, hip-hop, and country. The results of the survey are shown in the graph.

Favorite Type of Music
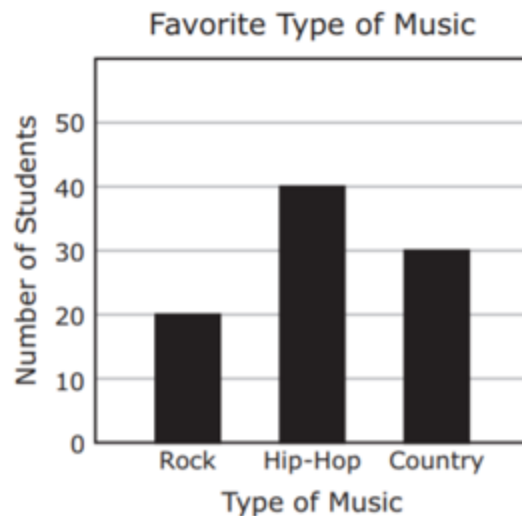
Based on the graph, how many students in a class of 360 students would be expected to choose hip-hop or rock as their favorite type of music?

F 240

G 80

H 60

J 180

6.4B – 2 (R)   **Ans: 320**   **eight**

29 In Austin, Texas, 8 bats ate 40 grams of insects in one night. At this rate, how many grams of insects could 64 bats eat in one night?

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

Grades 6–8 Assessments

17 Megan and Desmond each added the same amount of water to their aquariums. Megan mixed 5 mL of a chemical solution with every gallon of water for her aquarium. Desmond mixed 8 mL of the chemical solution with every 2 gallons of water for his aquarium.

Which of these statements is true?

A Megan used more solution per gallon of water than Desmond, because $5:1$ is greater than $8:2$.

B Megan used more solution per gallon of water than Desmond, because 5 mL is greater than 2 mL.

C Desmond used more solution per gallon of water than Megan, because 8 mL is greater than 5 mL.

D Desmond used more solution per gallon of water than Megan, because $8:2$ is greater than $5:1$.

20 The table shows the time Monique worked and the amount of money she earned during four different weeks.

Monique's Earnings

Time Worked (hours)	Amount Earned (dollars)
15	123.75
20	165
24	198
30	247.50

Based on the information in the table, how much will Monique earn if she works 40 hours in a week?

F $330

G $255.75

H $297

J $82.50

13 A farmer watered $\frac{3}{8}$ of a field. What percentage is equivalent to the fraction of the field the farmer watered?

A 24.00%

B 37.50%

C 8.30%

D 3.75%

28 A meteorologist at a television station reported that a town received 0.95 in. of rain. Which fraction is equivalent to this amount of rain in inches?

F $\dfrac{19}{50}$ in.

G $\dfrac{19}{20}$ in.

H $\dfrac{95}{10}$ in.

J $\dfrac{9}{5}$ in.

42 A restaurant offered cooking classes on 24 of the 30 days in November. What decimal is equivalent to the fraction of days in November that classes were offered at the restaurant?

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

Grades 6–8 Mathematics

36 A company spent 32% of its annual budget developing a new machine. What fraction of the company's budget was spent developing the new machine?

F $\dfrac{1}{32}$

G $\dfrac{5}{16}$

H $\dfrac{8}{25}$

J $\dfrac{4}{125}$

10 A waiter earned a 17% tip. What decimal is equivalent to 17%?

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

Grades 6–8 Mathematics

23 Dolores spent $13.00 of the $20.00 in her wallet. Which decimal represents the fraction of the $20.00 Dolores spent?

A   0.35

B   0.13

C   0.07

D   0.65

11 Mrs. Torres is mailing a package that weighs 12.5 pounds. The post office charges by the ounce to mail a package. How much does the package weigh in ounces?

    A 187 ounces

    B 200 ounces

    C 192.5 ounces

    D 100 ounces

39 A robot's height is 1 meter 20 centimeters. How tall is the robot in millimeters?

    A 1,200 millimeters

    B 1,020 millimeters

    C 120 millimeters

    D Not here

38 A warehouse floor has a perimeter of 6,615 feet. What is the perimeter of the floor in yards?

    F   2,205 yd

    G   19,845 yd

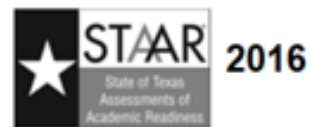   **H**   78,380 yd

    J   735 yd
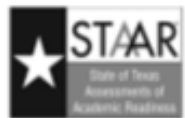
7   A can contains 24 fluid ounces of fruit juice. How many pints of fruit juice does the can contain?

    A   12 pt

    B   3 pt

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

    D $\frac{1}{3}$ pt

22 As part of a survey, 300 girls were asked to name their favorite sport. The results showed that 12 of the girls named bowling as their favorite sport. What percentage of the girls in the survey named bowling as their favorite sport?

F 4%

G 12%

H 25%

J 0.04%

47 In 2012 there were approximately 8,950 public libraries in the United States. A survey found that 76% of those libraries offered free access to electronic books. Based on this information, how many public libraries offered free access to electronic books in 2012?

  A 8,190

  B 118

  C 6,802

  D 760

11 Customers at an ice-cream shop took a survey. The results showed that 144 customers rated the shop as being "very satisfactory." This number represented 45% of the total number of customers who took the survey.

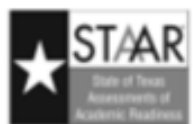What was the total number of customers who took the survey?

A 189

B 65

C 99

D 320

6.5B – 2 (R)   **fifteen X**

32 There are 90 girls and 60 boys in the sixth grade at a middle school. Of these students, 9 girls and 3 boys write left-handed. What percentage of the sixth graders at this middle school write left-handed?
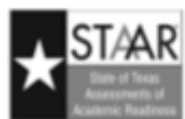
F 10%

G 8%

H 5%

J 15%

11 Yesterday 170 guests at a hotel called for room service, and 255 guests did not call for room service. What percentage of the guests at this hotel called for room service yesterday?

A 60%

B 15%

C 40%

D 85%

31 A shop owner offered a 20% discount off the regular price of a mirror. The amount of the discount is $3.

What is the regular price of the mirror?

A $15

B $6

C $9

D $18

6.6C – 2 (R)

37 Which table shows only values that represent the following relationship between q and r?

$$r = q + 10.1$$

A

q	r
5	50.5
7	70.7
9	90.9
11	111.1

C

q	r
5	10.6
7	10.8
9	11.0
11	11.2

B

q	r
5	15.1
7	17.1
9	19.1
11	21.1

D

q	r
5	15.1
7	15.3
9	15.5
11	15.7

44 The cost of downloading one song from a website is $0.99. Which equation can be used to find t, the cost in dollars of downloading n songs?

F $t = 0.99 + n$

G $n = 0.99 + t$

H $t = 0.99n$

J $n = 0.99t$

27 Mr. Martínez asked his students to write a situation that could describe the relationship between all the values of x and y in the table.

x	0	1	2	3
y	6	7	8	9

Which situation best describes the relationship between all the values of x and y in the table?

A Rachel had six dollars and then started to save one dollar each week.

B Beatriz ran one mile the first week and one mile each week after that.

C James read zero books in six months and then started to read one book each week.

D Marion has six times the number of toy trains that Tony has.

13 The graph shows the number of points, y, a player earns in a balloon game based on the number of balloons the player pops, x.

Balloon Game

Number of Points / Number of Balloons Popped
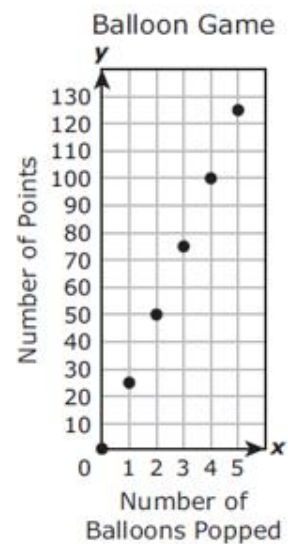
Which equation best represents the relationship between x and y?

A $y = x + 25$

B $x = y + 25$

C $x = 25y$

D $y = 25x$

6.6C – 2 (R)   **seven W**

5 A carpenter charges $720 for 18 hours of work. She charges the same amount of money for each hour of work.

Which table shows the relationship between the amount of time the carpenter works and the amount of money she charges?

A Carpenter's Charges

Amount of Time Worked (hours)	Amount Charged (dollars)
2	80
4	160
6	240
8	320

C Carpenter's Charges

Amount of Time Worked (hours)	Amount Charged (dollars)
3	75
5	125
7	175
9	225

B Carpenter's Charges

Amount of Time Worked (hours)	Amount Charged (dollars)
19	720
20	738
21	756
22	774

D Carpenter's Charges

Amount of Time Worked (hours)	Amount Charged (dollars)
14	720
15	720
16	720
17	720

35 Which situation can be represented by the equation $y = 74x$?

    A A company uses a total of y gallons of water at a rate of 74 gallons per hour for x hours.

    B A restaurant serves a total of y meals in one day, in which 74 meals are served during the first hour and x meals are served during the remaining hours.

    C A company manufactures a total of 74 drinking glasses every hour, with x of the glasses made of clear glass and y of them made of blue glass.

    D A restaurant prepares a total of y batches of pizza sauce from 74 pounds of tomatoes, with each batch weighing x pounds.

1 Frank had $65. He spent $2 per day for 7 days. Then he was given $9 to divide equally between himself and his 2 brothers. The following expression can be used to find the amount of money Frank had after that.

$$65 - 2 \cdot 7 + 9 \div 3$$

Based on this expression, what is the amount of money Frank had remaining?

A $150

B $54

C $20

D $444

46 What is the prime factorization of 110?

    F $5^2 \cdot 11$

    G $2^5 \cdot 11$

    H $5 \cdot 22$

    J $2 \cdot 5 \cdot 11$

21   Mr. Gonzales showed students part of the prime factorization of 90. One factor is missing.

$$2 \cdot 3^2 \cdot \underline{}$$

What number completes this prime factorization?

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

Grades 6–8 Mathematics

9 Leon wrote an expression that is equivalent to $(30 + 6) \div 12$. Which expression could be the one Leon wrote?

A $36 \div 3 \cdot 4$

B $(3 \cdot 3 \cdot 4) \div 4 \cdot 3$

C $5 \cdot 6 + 2 \cdot 3 \div 3 \cdot 2 \cdot 2$

D $(3 \cdot 3 \cdot 2 \cdot 2) \div (3 \cdot 2 \cdot 2)$

12 Which expression is equivalent to $16 + 2 \cdot 36$?

    F $2^4 + 2^3 \cdot 3^2$

    G $2^3 + 2^3 \cdot 3^2$

    H $2^4 + 2^2 \cdot 3^2$

    J $2^3 + 2^2 \cdot 3^3$

9 Which two expressions are equivalent?

A $4 + (3 \cdot y)$ and $(4 + 3) \cdot y$

B $(18 \div y) + 10$ and $10 + (y \div 18)$

C $12 - (y \cdot 2)$ and $12 - (2 \cdot y)$

D $(10 - 6) \div y$ and $10 - (6 \div y)$

J $104 + 263.50$
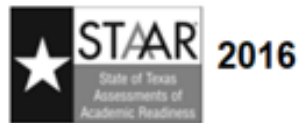
9 Which two expressions are equivalent?

    A $4 + (3 \cdot y)$ and $(4 + 3) \cdot y$

    B $(18 \div y) + 10$ and $10 + (y \div 18)$

    C $12 - (y \cdot 2)$ and $12 - (2 \cdot y)$

    D $(10 - 6) \div y$ and $10 - (6 \div y)$

STAAR 2016

State of Texas
Assessments of
Academic Readiness

6.7D – 1 (R)

thirty one W

52 Which two expressions are equivalent?

F $9(6 + x)$
$9 \cdot 6 + 9 \cdot x$

G $x + (8 \cdot 9)$
$(x + 8) \cdot 9$

H $8 \cdot 6 \div x$
$8 \cdot x \div 6$

J $6 \cdot x + 3$
$6 \cdot (x + 3)$

30 Which expression is equivalent to $30 \div (3 + x)$?

    F $(3 + x) \div 30$

    G $30 \div (x + 3)$

    H $(3 \div 30) + x$

    J $30 \div 3 + 30 \div x$

16 Which expression is equivalent to $y \cdot 48$?

F $(y \cdot 40) + 8$

G $(y \cdot 4) \cdot 8$

H $(y \cdot 40) + (y \cdot 8)$

J $(y \cdot 4) + 8$

8 Shea wrote the expression $5(y + 2) + 4$ to show the amount of money five friends paid for snacks at a baseball game. Which expression is equivalent to the one Shea wrote?

F $5 + y + 5 + 2 + 4$

G $5 \cdot y \cdot 5 \cdot 2 + 4$

H $5 \cdot y \cdot 4 + 5 \cdot 2 \cdot 4$

J $5 \cdot y + 5 \cdot 2 + 4$

25 Which set of angle measures CANNOT be the angle measures of a triangle?

    A 60°, 60°, 61°

    B 1°, 1°, 178°

    C 13.9°, 16.1°, 150°

    D 59°, 60°, 61°

7 The rectangle below represents the base of a rectangular prism. Use the ruler provided to measure the dimensions of the rectangle to the nearest centimeter.

The height of the rectangular prism is 12 centimeters. What is the volume of the rectangular prism?

A 32 cm^3

B 20 cm^3

C 360 cm^3

D 240 cm^3

48 Ms. Chen will paint a triangular tile. A drawing of the tile is shown. Use the ruler provided to measure the dimensions of the tile to the nearest centimeter.
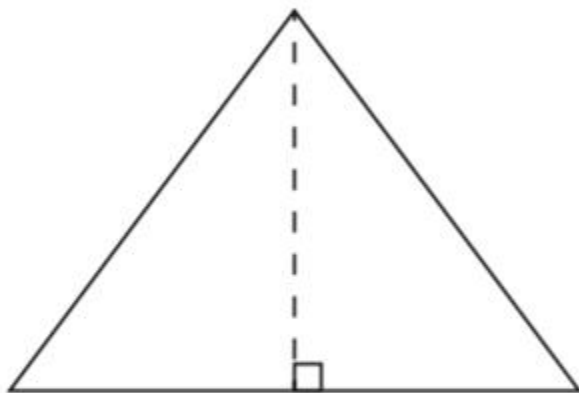
Which measurement is closest to the area of the tile in square centimeters?

F 12 cm^2

G 24 cm^2

H 15 cm^2

J 30 cm^2

7 The playground at a park is shaped like a trapezoid. The dimensions of the playground are shown in the diagram.
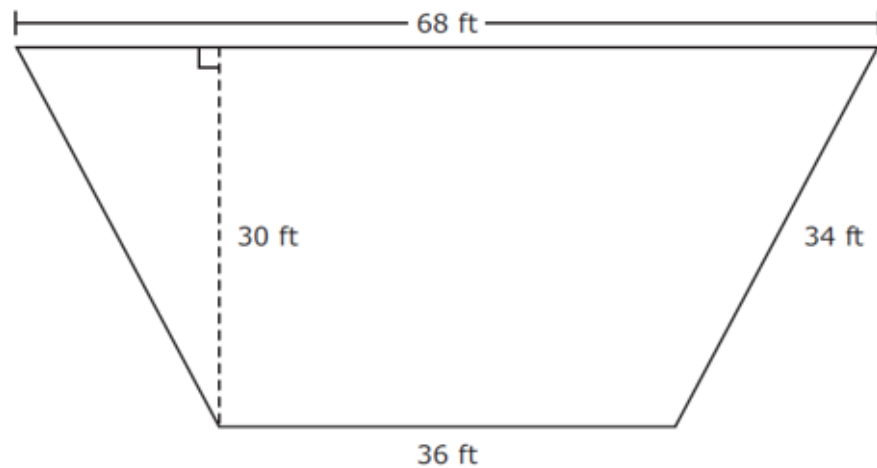
What is the area of the playground in square feet?

A 3,120 ft^2

B 1,560 ft^2

C 1,768 ft^2

D 3,536 ft^2

6.8D – 3 (R)   **twenty five X**

26 The rectangle shown represents the base of a rectangular prism. Use the ruler pr

measure the length and width of the rectangle to the nearest $\frac{1}{4}$ inch.

The height of the prism is 2 inches. Which measurement is closest to the volume
in cubic inches?
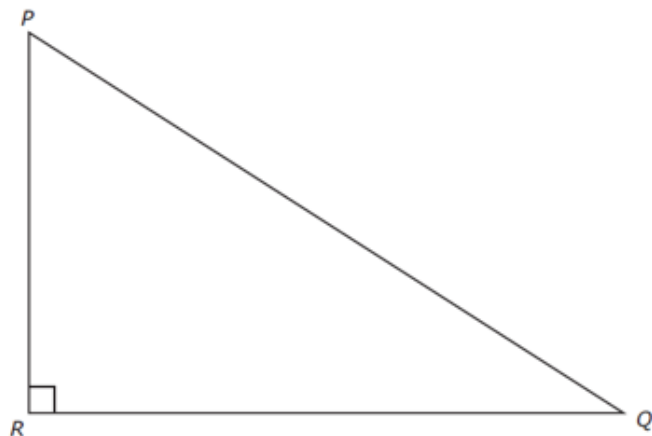
F   27 in.^{3}

G   22 in.^{3}

H   11 in.^{3}

J   12 in.^{3} _____

6.8D – 3 (R)   **twenty six W**

17 Triangle *PQR* is shown. Use the ruler provided to measure the dimensions of the triangle to

the nearest $\frac{1}{2}$ inch.

Which measurement is closest to the area of triangle *PQR* in square inches?

A 5 in.^{2}

B $8\frac{3}{4}$ in.^{2}

C $6\frac{1}{2}$ in.^{2}

D 11 in.^{2}

34 The figure represents a water trough in the shape of a rectangular prism. The dimensions of the water trough are given in feet.

Water Trough

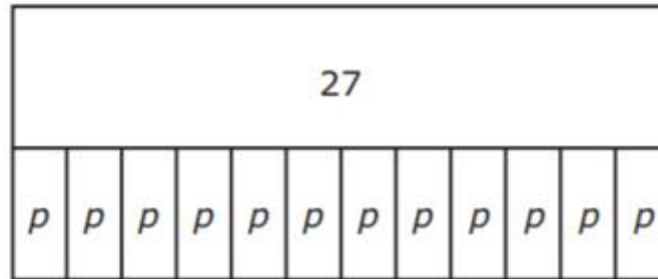4 ft

7 ft

$2\frac{1}{2}$ ft
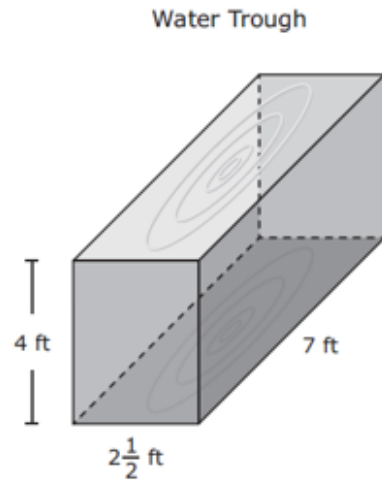
What is the volume of water in the trough in cubic feet when the trough is full?

F $21\frac{1}{2}$ ft³

G $13\frac{1}{2}$ ft³

H 70 ft³

J 76 ft³

18 Holly bought a magazine subscription for a year. She paid $27. Holly wanted to find the price, p, of the subscription each month. She created the model shown to help find this price.

27

p	p	p	p	p	p	p	p	p	p	p	p

What was the price of the subscription each month?

F $39.00

G $2.25

H $324.00

J $22.50

50 A student needs to collect at least 10 flowers for a science project. The student has already collected 3 flowers. The inequality shown can be used to find n, the number of flowers the student still needs.

$$n + 3 \geq 10$$

Which inequality represents the solution set for this situation?

F $n \leq 13$

G $n \geq 13$

H $n \leq 7$

J $n \geq 7$

5 What value of x makes this equation true?

$$-90 = -100 + x$$

A −10

B 10

C −190

D 190

31 Saritha will construct a rectangle that has a height of 4 units and an area of up to 48 square units. Which inequality represents all the possible lengths in units of the bases, b, that Saritha can use to construct this rectangle?

A $b \leq 44$

B $b \geq 52$

C $b \leq 12$

D $b \geq 192$

13 Alejandra has $600 in her checking account. She wants to spend part of this money on a computer. She wants to have at least $250 left in her checking account after buying the computer. The inequality shown can be used to find t, the amount of money in dollars that Alejandra can spend on the computer.

$$t + 250 \leq 600$$

Which inequality represents all possible values of t?

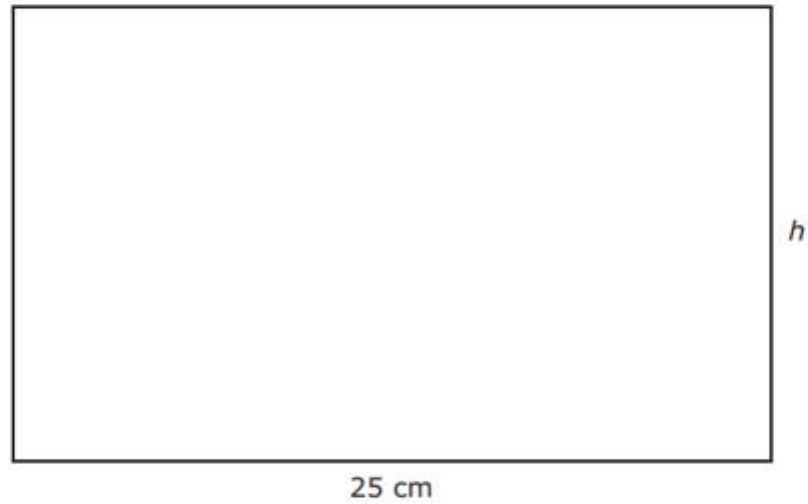A $t \geq 350$

B $t \leq 850$

C $t \leq 350$

D $t \geq 850$

38   The area of the rectangle shown is 375 square centimeters.

25 cm
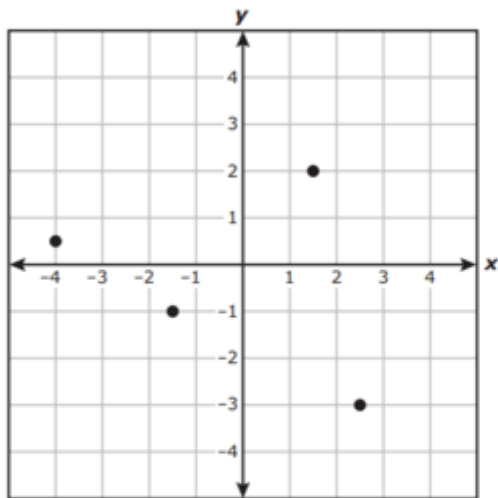
What is h, the height of the rectangle in centimeters?

F   350 cm

G   7.5 cm

H   15 cm

J   162.5 cm

6.11A – 3 (R)   **forty one X**

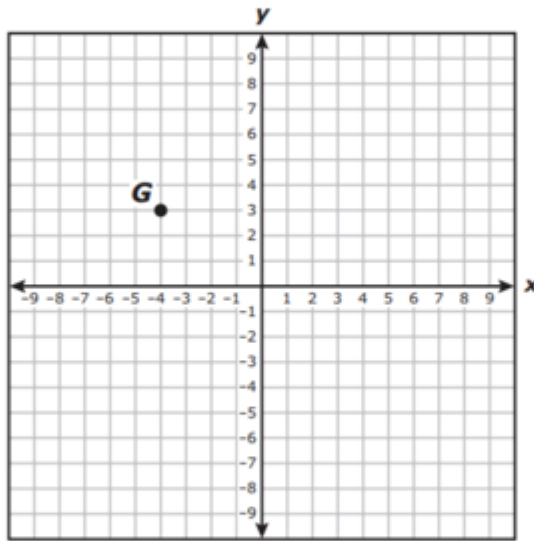**5** Four points are graphed on the coordinate grid.

Which ordered pair does **not** appear to be represented by one of these points?

A $(\frac{5}{2}, -3)$

B $(-1, -1\frac{1}{2})$

C $(\frac{3}{2}, 2)$

D $(-4, \frac{1}{2})$

41 Benisha graphed point *G* on the coordinate grid. She will graph point *H* at a location 5 units
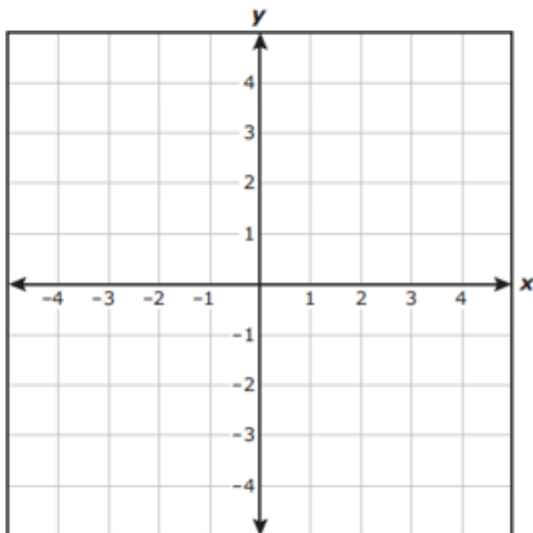away from point *G*.

Which ordered pair could represent the location of point *H*?

A $(-4, 5)$

B $(-9, 8)$

C $(1, 3)$

D $(-4, -1)$

6.11A – 3 (R)

2 A coordinate grid is shown below.

Which ordered pair describes a point that is located 4 units to the left of the origin and 2 units below the *x*-axis?
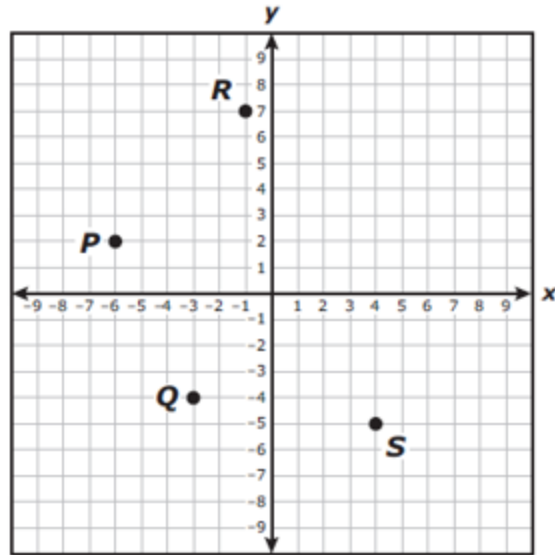
F (4, 2)

G (−4, −2)

H (−4, 2)

J (4, −2)

6.11A – 3 (R)   **thirty two   -6**

21   The coordinate grid shows points P, Q, R, and S. All the coordinates for these points
     are integers.

Grades 6–8 Mathematics

What is the value of the x-coordinate of point P?

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

17 The list shows the number of licenses issued every year to lobster boats in Massachusetts for a five-year period.
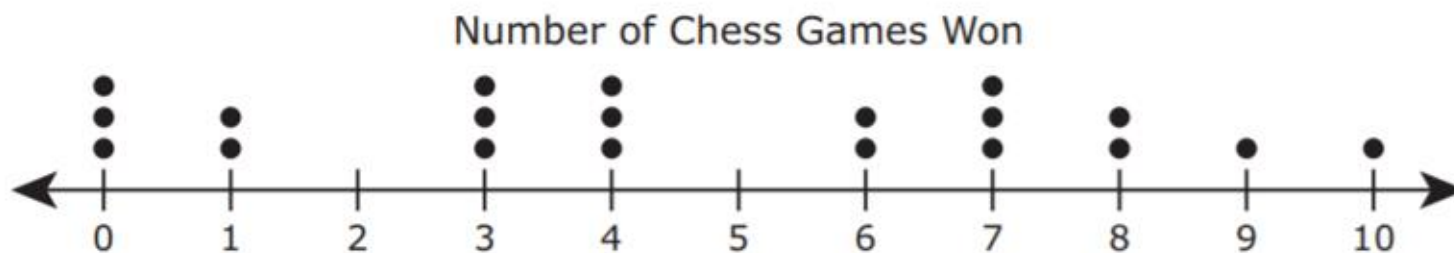
$$551, 554, 529, 534, 530$$

What is the range of these data?

A 534

B 540

C 21

D 25

34 The dot plot shows the number of chess games won by each of the 20 students in a competition.

Number of Chess Games Won

Which statement about the data is true?

F The median is 4, and the interquartile range is 10.

G The median is 4, and the interquartile range is 5.

H The median is 5, and the interquartile range is 10.

J The median is 5, and the interquartile range is 5.

33 The list shows the area in square feet of each apartment available for rent in a building.

565, 961, 867, 517, 627, 714, 517, 728

What is the range of these areas in square feet?

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

Grades 6–8 Mathematics

4 The dot plot shows the lengths of the 12 trailers sold at a store last month.

Trailers Sold

Length (feet)
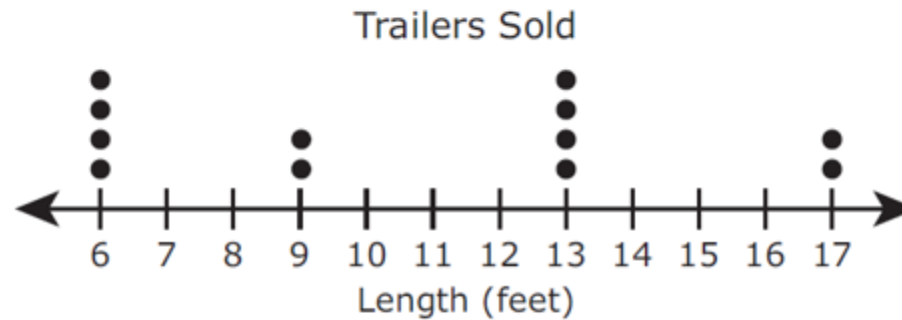
Which statement about the data is true?

F The interquartile range is 7, and the range is 17.

G The interquartile range is 7, and the range is 11.

H The interquartile range is 2.75, and the range is 17.

J The interquartile range is 2.75, and the range is 11.

6.12C – 4 (R)   **thirty four 18**

29 Patricia recorded the prices of watches at a store. The prices are shown in the table.

Watches

Price (dollars)
15
22
16
24
16
20
12
27

Grades 6–8 Mathematics

What is the median price of the watches in dollars?

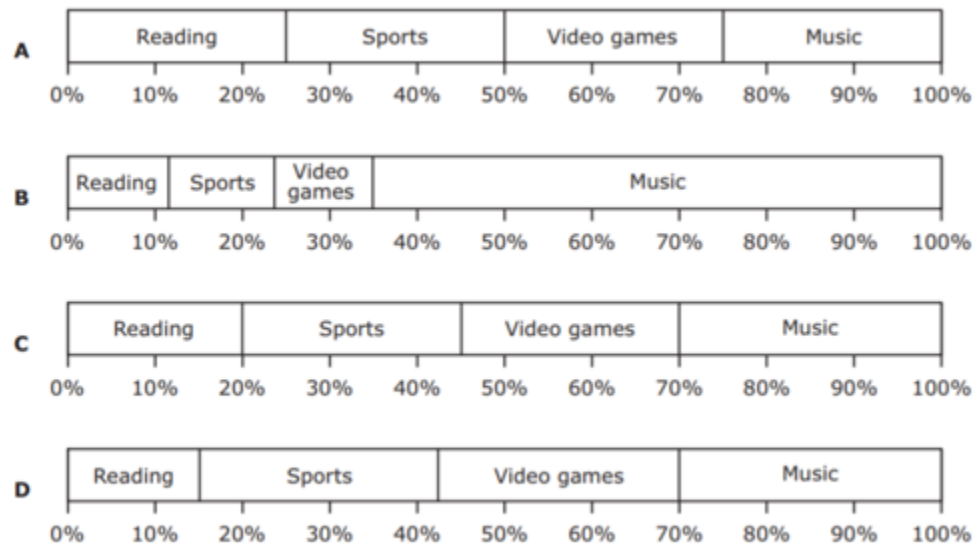Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

3 Hector surveyed all the sixth graders at his school about their favorite after-school activity. The table shows the results that were used to make a bar graph.

Favorite Activities

Activity	Number of Students
Reading	44
Sports	55
Video games	55
Music	66

Which percentage bar graph best represents the data?

A

| Reading | Sports | Video games | Music |

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

B

| Reading | Sports | Video games | Music |

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

C

| Reading | Sports | Video games | Music |

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

D

| Reading | Sports | Video games | Music |

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

43 Shemar bought a bag of marbles. He took the marbles out of the bag one at a time. He recorded the color of each marble in this tally chart.

Marbles

Color	Number of Marbles
Black	卌 卌 卌
Yellow	卌 卌
Green	卌 卌 II
Red	卌
White	卌 III

In which table do the percentages represent the relative frequency of these marble colors?

Marbles

A

Color	Percentage of All Marbles
Black	15%
Yellow	10%
Green	12%
Red	5%
White	8%

Marbles

C

Color	Percentage of All Marbles
Black	10%
Yellow	16%
Green	20%
Red	24%
White	30%

Marbles

B

Color	Percentage of All Marbles
Black	15%
Yellow	25%
Green	37%
Red	42%
White	50%

Marbles

D

Color	Percentage of All Marbles
Black	30%
Yellow	20%
Green	24%
Red	10%
White	16%

4 The students in a class were each asked to name their favorite meal of the day. The results are shown in this percentage bar graph.

Favorite Meal

KEY
- Supper
- Lunch
- Breakfast
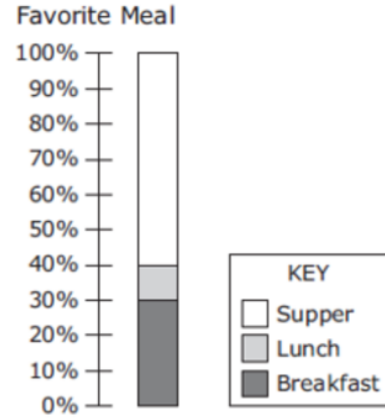
Which table could be represented by the percentage bar graph?

F

Student Results

Meal	Number of Students
Breakfast	3
Lunch	4
Supper	10

H

Student Results

Meal	Number of Students
Breakfast	9
Lunch	3
Supper	18

G

Student Results

Meal	Number of Students
Breakfast	4
Lunch	4
Supper	12

J

Student Results

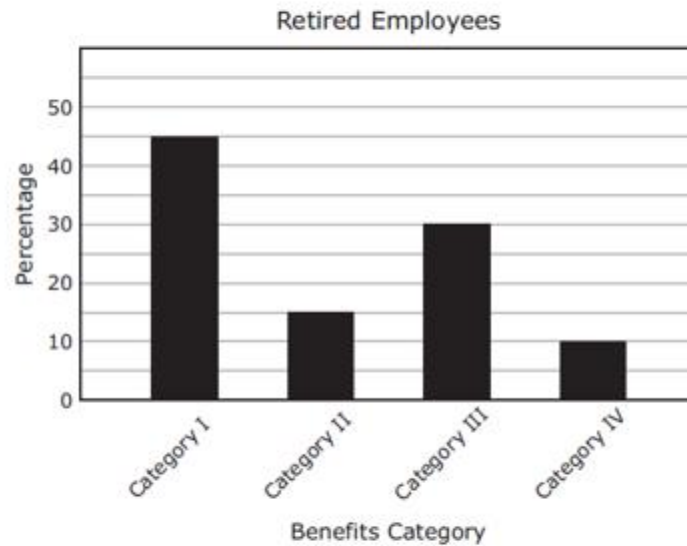| Meal	Number of Students
Breakfast	0
Lunch	3
Supper	4

37 Employees who have retired from a company are placed in different benefit categories. The bar graph shows the percentages of the retired employees in different benefit categories.


Retired Employees

Which statement about the employees is supported by the data in the bar graph?

A More than half the employees are in Category I.

B The number of employees in Category II is twice the number of employees in Category III.

C The number of employees in Category II or Category III is greater than the number of employees in Category I.

D The number of employees in Category I is three times the number of employees in Category II.

8 Students recorded the amount of liquid in fluid ounces each of them drank in one day. The box plot shows the summary of the results.


Amount of Liquid (fluid ounces)
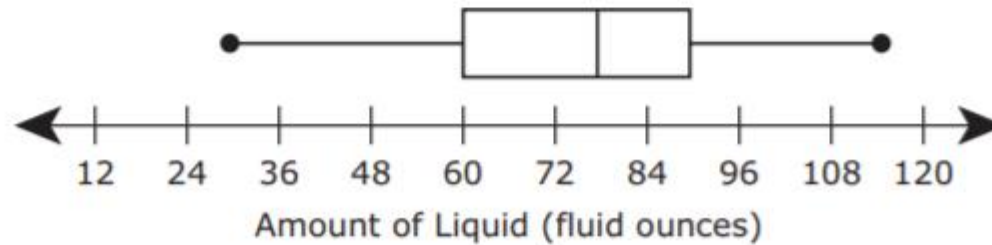
Which statement best describes the data represented in the box plot?

F Half the students drank from 78 to 114 fluid ounces.

G The greatest number of students drank from 30 to 78 fluid ounces.

H The data represent 78 student responses.

J The mean number of fluid ounces that the students drank is 78.

49 A choir director made a histogram showing the ages of the members of the choir.


Ages of Choir Members
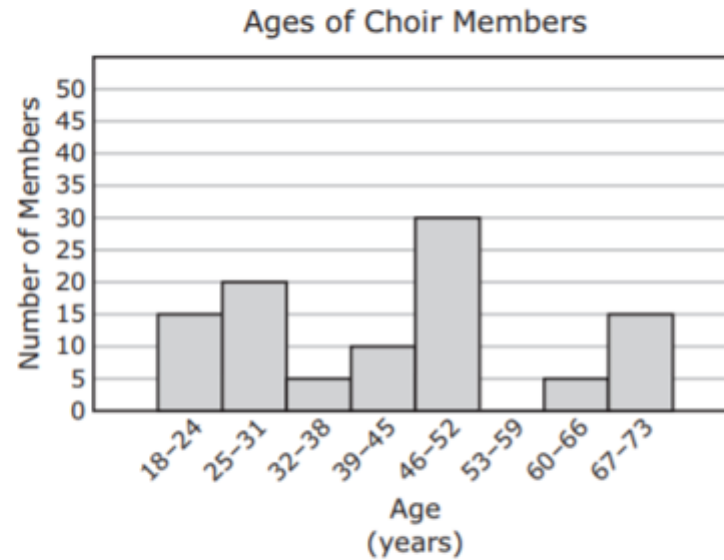
Which statement about the data in the histogram must be true?

A More than half the members are from 46 to 73 years old.

B There are more men than women in the choir.

C The choir has a total of 100 members.

D Exactly 20 members are less than 32 years old.

14 The box plots summarize the attendance for the spring musical and the fall musical. Each
    musical was performed for six evenings.
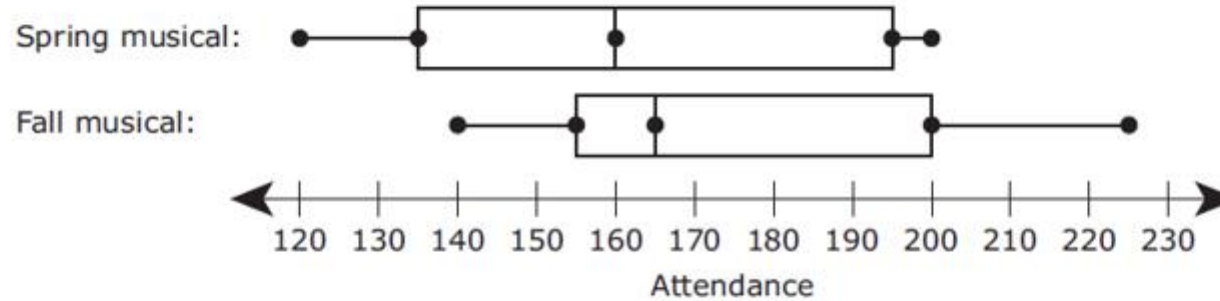
Which statement best describes the data represented in the box plots?

F   The range in attendance for the fall musical is 85.

G   The interquartile range for the spring musical is 45.

H   For half the evenings at the fall musical, the attendance was less than 160 people.

J   For half the evenings at the spring musical, the attendance was between 155 and
    200 people.

28 The total number of items sold by each student who participated in a fund-raiser is shown in the stem and leaf plot.

Items Sold

Stem	Leaf
1	2 5 5 5 8
2	2 2 3 6 7 9
3	0 0 1 1 2 6
4	1 2 8 8 9 9

1|2 means 12 items.

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

F The number of students who sold between 10 and 20 items is greater than the number of students who sold more than 40 items.

G The number of students who sold more than 30 items is greater than the number of students who sold fewer than 30 items.

H The most common number of items sold is 30.
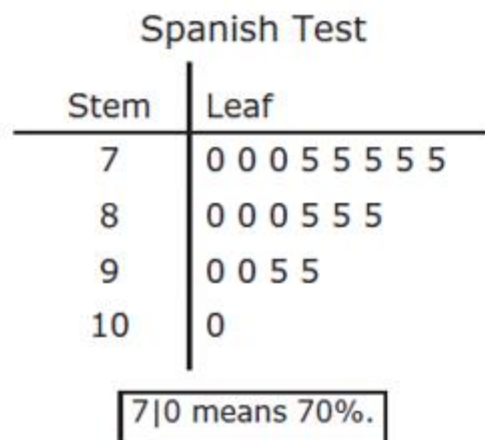
J The most common number of items sold is 15.

19   The stem and leaf plot shows the percentage of questions on a Spanish test that were answered correctly by each student in a class.

Spanish Test

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

7|0 means 70%.

Which statement is true?

A   Nine students answered 55% of the questions correctly.

B   Half the students answered 70% or 75% of the questions correctly.

C   Eight students answered more than 80% of the questions correctly.

D   Ten students answered 100% of the questions correctly.