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

F $16.32

G $18.88

H $63.68

J $35.20

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

    A $335.80

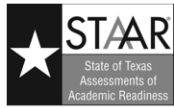   **B** $102.20

    C $116.80

    D $219.00

37 There are 40 houses in a neighborhood.

- Company X provides electricity to $\frac{1}{8}$ of the houses.

- Company Y provides electricity to $\frac{2}{5}$ of the houses.

- Company Z provides electricity to the remaining houses.

In this neighborhood, Company Z provides electricity to —

A 21 houses
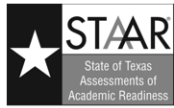
B 24 houses

C 16 houses

D 19 houses

5 The table shows the prices of some breakfast items at a restaurant. Sara ordered 2 eggs, a slice of bacon, and a glass of orange juice for breakfast. The sales tax for the order was $0.48. She paid for her breakfast with a $10 bill.

Breakfast Menu

Item	Price
One egg	$1.69
Slice of bacon	$1.49
Glass of orange juice	$1.09

How much change should Sara receive from the $10 bill?

A $3.56

B $6.44

C $5.25

D $4.75

State of Texas
Assessments of
Academic Readiness

36 Rebecca needs $10\frac{1}{2}$ yards of fabric to make a quilt. She has one piece of fabric that is

$2\frac{1}{2}$ yards and another piece of fabric that is $4\frac{1}{4}$ yards. How many more yards of fabric does

Rebecca need to make the quilt?

F $4\frac{1}{4}$ yd

G $3\frac{1}{4}$ yd

H $3\frac{3}{4}$ yd

J $6\frac{3}{4}$ yd

17 Maya has 120 caramel apples to sell. Each caramel apple is covered with one topping.

- $\frac{1}{5}$ of the caramel apples are covered with peanuts.

- $\frac{1}{3}$ are covered with chocolate chips.

- $\frac{3}{10}$ are covered with coconut.

- The rest are covered with sprinkles.

How many caramel apples are covered with sprinkles?

A 100

B 33

C 25

D 20

35 Marsha gave the cashier $20 to pay for 3 pairs of socks. The cashier gave her $5.03 in change. Each pair of socks cost the same amount.

What is the cost in dollars and cents for each pair of socks?

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

Grades 6–8 Mathematics

STAAR 2016
State of Texas
Assessments of
Academic Readiness
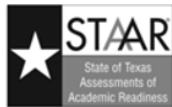
7.4A – 2 (R)   **six W**

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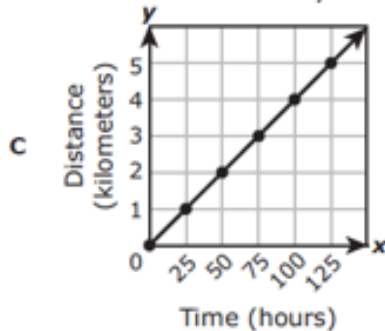   representation shows the distance a dolphin can travel at this rate?

Distance Traveled by a Dolphin

A

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

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

Distance Traveled by a Dolphin

C

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

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

Caroline's Cell Phone Plan

F

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

Caroline's Cell Phone Plan

H

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

Caroline's Cell Phone Plan

G

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

Caroline's Cell Phone Plan

J

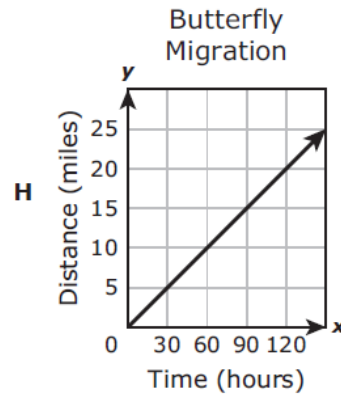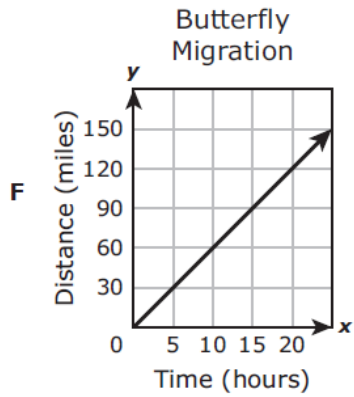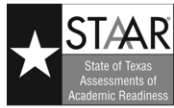| Month	1	2	3	4
Total Amount Paid	$32	$64	$96	$128
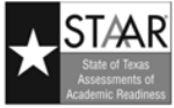
54 During migration, a butterfly can travel 30 miles in 1 hour. Which graph best represents y, the number of miles a butterfly can travel in x hours?

Butterfly Migration

F

Butterfly Migration

H

Butterfly Migration

G

Butterfly Migration

J
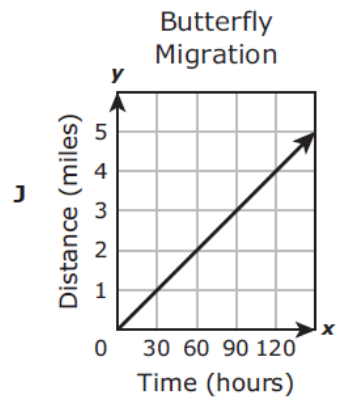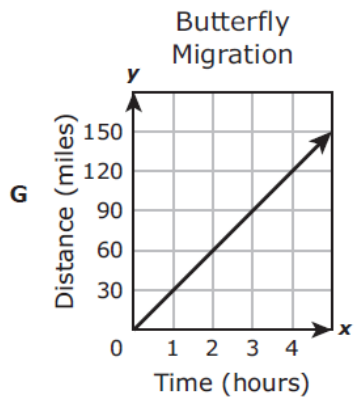
7.4A – 2 (R)   **four Y**

9 Which of these does NOT represent the distance a car travels when going 55 miles per hour?

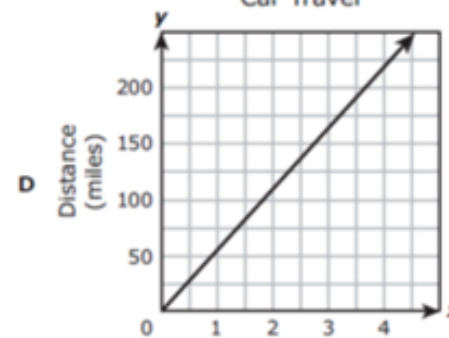**A** $d = 55t$, where d represents distance in miles and t represents time in hours

Car Travel

B

Time (hours)	Distance (miles)
1	55
1.5	82.5
2	110
2.5	137.5

C In 3 hours a car will travel a distance of 160 miles.

Car Travel

D

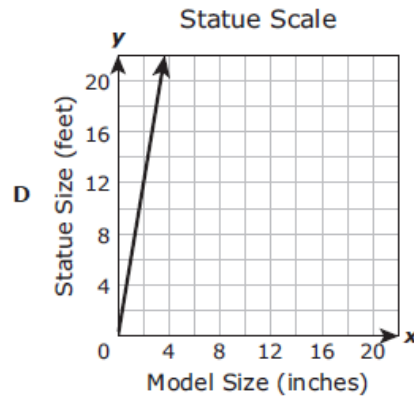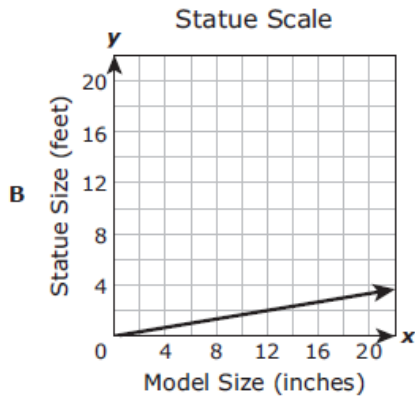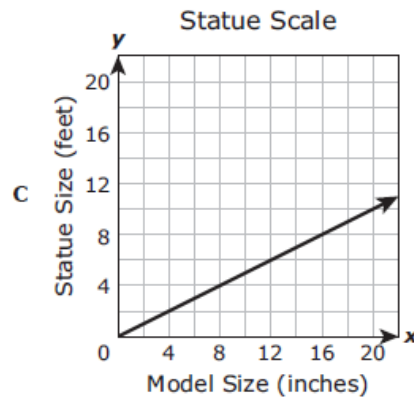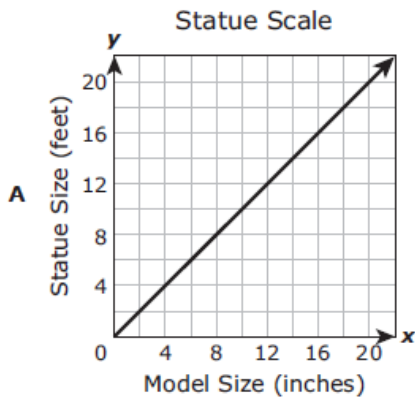**7.4A – 2 (R)**   **five Y**

25 An artist is making a scale model of a statue. On the model 2 inches represents 1 foot on the actual statue. Which graph best represents this relationship?

Statue Scale

A

Statue Scale

C

Statue Scale

B

Statue Scale

D

5   Cheddar cheese costs $4.25 per pound. Which equation best represents y, the total cost of x pounds of cheddar cheese?

   A $x = 4.25 + y$

   B $x = 4.25y$

   C $y = 4.25 + x$

   D $y = 4.25x$
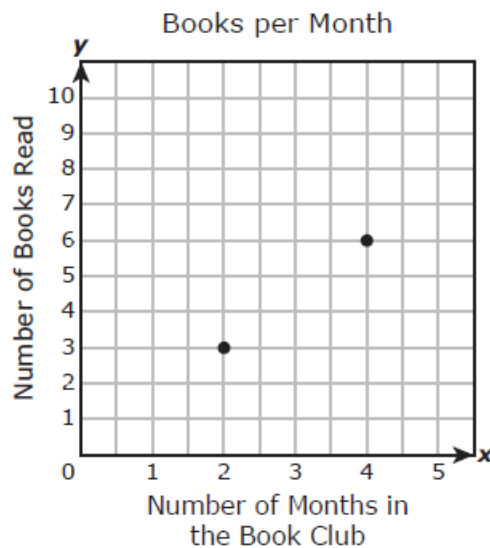
40 The graph represents the linear relationship between the number of books Layla has read and the number of months she has been a member of a book club.

Books per Month

Number of Books Read

Number of Months in
the Book Club

Which of these statements is supported by the rate of change in this relationship?

F Layla read 2 books in the first 3 months she was a member of the book club.

G Layla read 3 books in the first 2 months she was a member of the book club.

H Layla read 3 books in the first 4 months she was a member of the book club.

J Layla read 4 books in the first 3 months she was a member of the book club.

7.4D – 2 (R)   **ten Y**

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

   A 0.5 g

   B 1,152 g

   C 72 g

   D 2 g

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

    F $13\frac{1}{2}$ mi
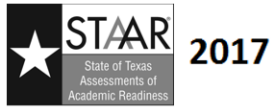
    G $6\frac{3}{4}$ mi

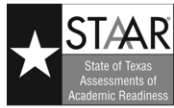   **H** $3\frac{3}{8}$ mi

    J $24\frac{1}{2}$ mi

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

  F 20%

  G 25%

  H 80%

  J 50%

14 The price of a video game was reduced from $60 to $45. By what percentage was the price of the video game reduced?

F   15%

G   25%

H   75%

J   40%

7.4D – 2 (R.)   **eight X**

21 Kiara downloaded 264 pictures from her cell phone to her computer. These pictures took up 528 megabytes of space on her computer. Each picture took up the same amount of space. How many megabytes do 35 of these pictures take up?

   A 18 MB

   B 70 MB

   C 8 MB

   D 23 MB

7.4D – 2 (R.)   **Nine X**

9 The ratio of boys to girls in Ms. Cunningham's class is 2 to 3. There are 18 girls in the class.

What is the total number of students in Ms. Cunningham's class?

A 12

B 30

C 45

D 27

26 Russell has a collection of 1,200 pennies. Of these pennies, 25% are dated before 1980, 35% are dated from 1980 to 2000, and the rest are dated after 2000.

How many pennies in Russell's collection are dated after 2000?

F 480

G 720

H 40

J 60

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

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.
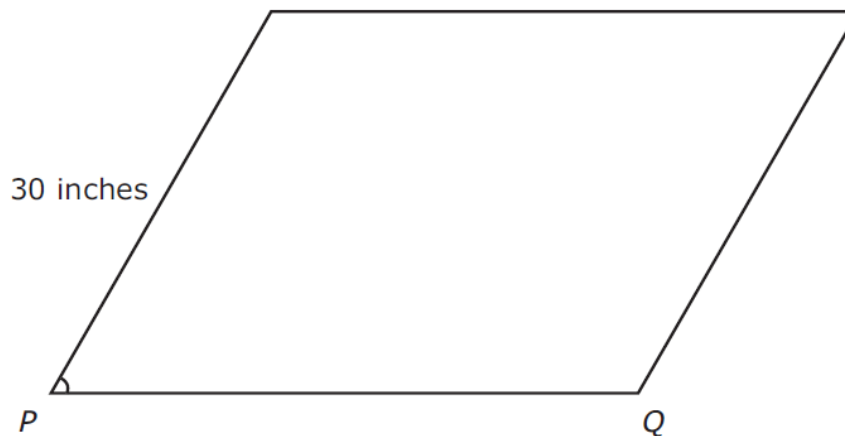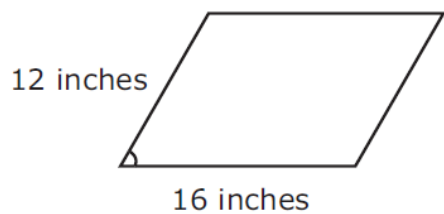
Grades 6–8 Mathematics

7.5C – 3 (R)   **sixteen W**

42 The two parallelograms below are similar.

30 inches

12 inches

16 inches   *P*   *Q*

What is the length in inches of $\overline{PQ}$?

F   40 in.

G   34 in.

H   38 in.

J   14 in.

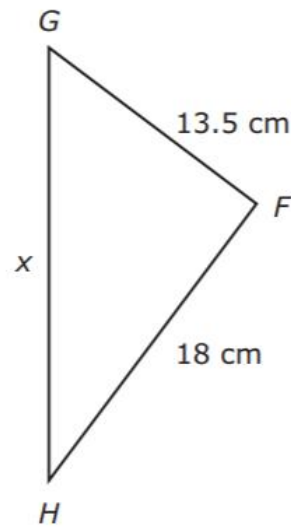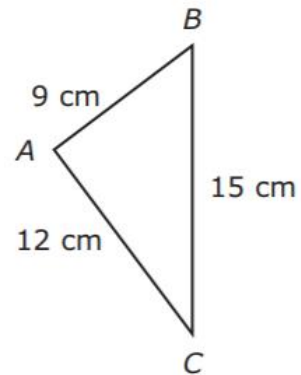**7.5C – 3 (R)**   **seventeen Y**

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

   A 410 cm

   B 15.5 cm

   C 16.4 cm

   D 162 cm
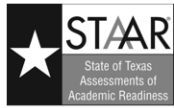
2 Triangle *ABC* is similar to triangle *FGH*.

What is the value of *x* in centimeters?

F 22.5 cm

G 8 cm

H 10.8 cm

J 30 cm

35 The distance between two cities on a map is 3.5 centimeters. The map uses a scale in which 1 centimeter represents 20 kilometers. What is the actual distance between these two cities in kilometers?

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

Grades 6–8 Assessments

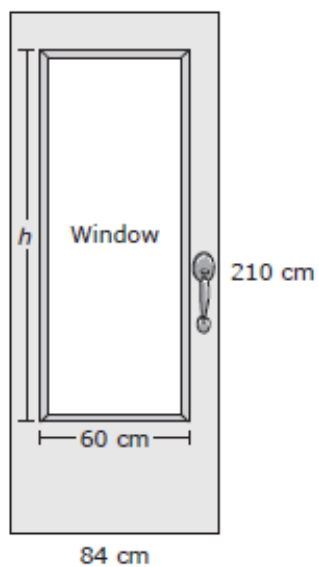|				.		
⓪	⓪	⓪	⓪		⓪	⓪
①	①	①	①		①	①
②	②	②	②		②	②
③	③	③	③		③	③
④	④	④	④		④	④
⑤	⑤	⑤	⑤		⑤	⑤
⑥	⑥	⑥	⑥		⑥	⑥
⑦	⑦	⑦	⑦		⑦	⑦
⑧	⑧	⑧	⑧		⑧	⑧
⑨	⑨	⑨	⑨		⑨	⑨

2018

16 The diagram shows a door that has a window in it. The front faces of the door and the window are similar rectangles that have the dimensions shown.

What is h, the height of the window in centimeters?

F   66 cm

G   186 cm

H   150 cm

J   Not here

32 An architect built a scale model of a sports stadium using a scale in which 2 inches represents 30 feet. The height of the sports stadium is 180 feet.

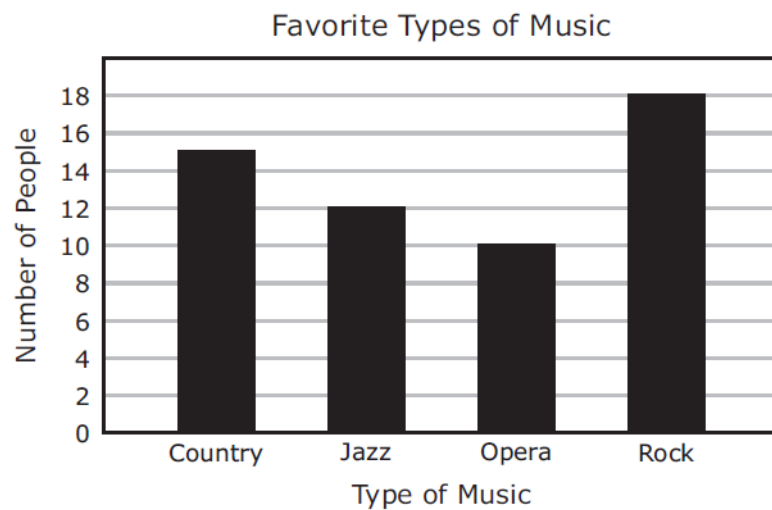What is the height of the scale model in inches?

F 3 in.

G 105 in.

H 12 in.

J 60 in.

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

Favorite Types of Music
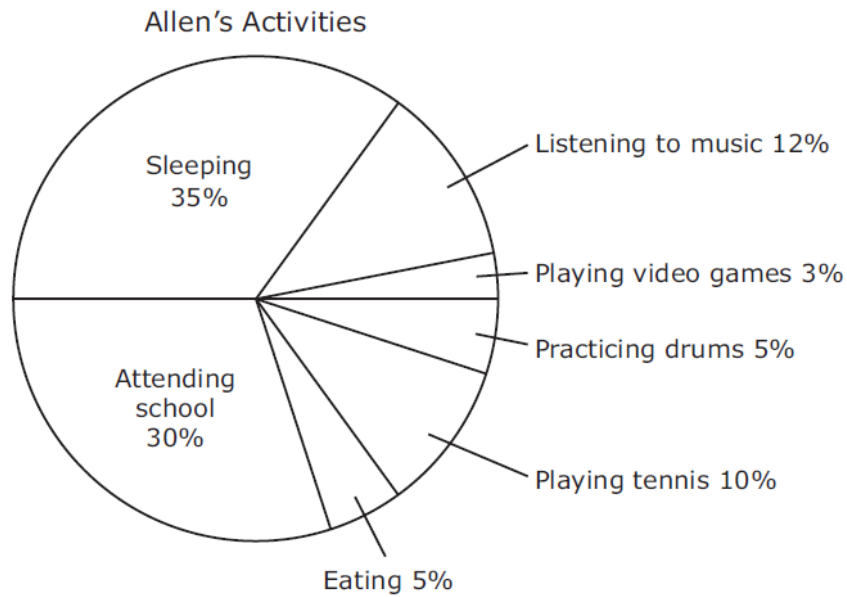

Based on the information in the graph, which types of music were chosen by 40% of the people surveyed?

A Country and opera

B Jazz and opera

**C** Jazz, opera, and rock

D Country, jazz, and rock

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

Allen's Activities

- Sleeping 35%
- Listening to music 12%
- Playing video games 3%
- Practicing drums 5%
- Attending school 30%
- Playing tennis 10%
- Eating 5%

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

F 2.88 hours

G 0.48 hour
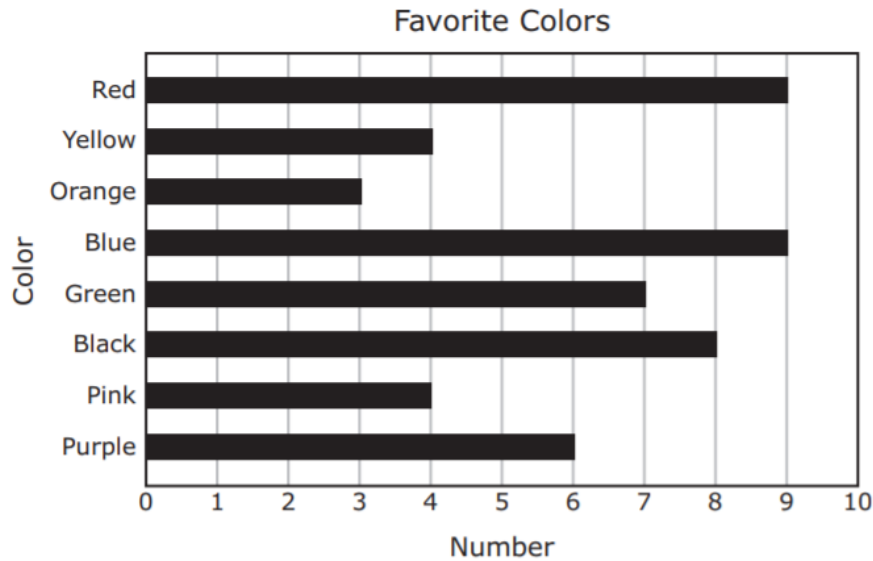
H 2.40 hours

J 0.12 hour
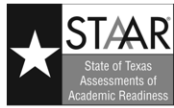
15 The graph shows the favorite colors chosen by some middle school students.

Favorite Colors

Which statement is supported by the information in the graph?

A Fewer than 30% of the students chose red, yellow, or orange as their favorite color.

B More than $\frac{1}{10}$ of the students chose pink as their favorite color.

C Exactly 18% of the students chose blue as their favorite color.

D Exactly $\frac{2}{5}$ of the students chose green, black, or purple as their favorite color.

7.6G – 4 (R)   **sixteen W**

26 The circle graph shows how Tremaine divided his time on the computer last week.

Tremaine's Computer Time
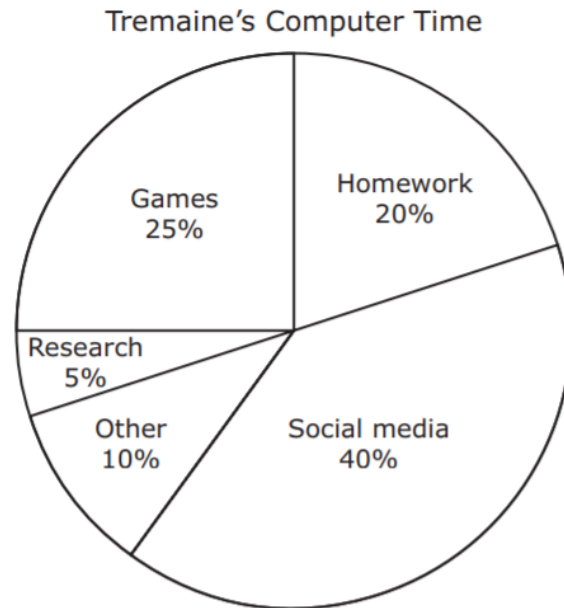
Tremaine used the computer a total of 30 hours last week. How many more hours did
Tremaine use the computer to play games than to do research?

F   6 hours

G   20 hours

H   7.5 hours

J   1.5 hours

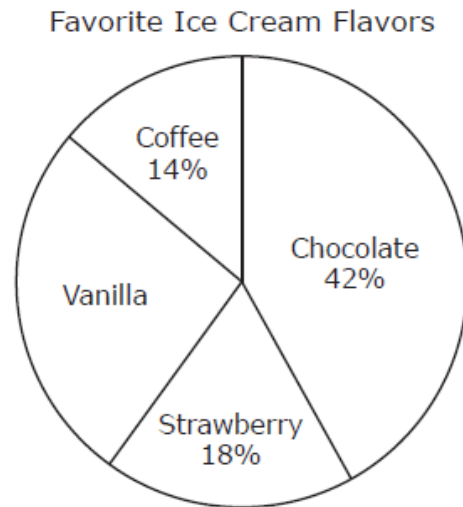6 Ursula surveyed 50 classmates about their favorite ice cream flavors. Each classmate chose one flavor. The results are shown in the circle graph.

Favorite Ice Cream Flavors

Coffee 14%

Chocolate 42%

Vanilla

Strawberry 18%

How many more of Ursula's classmates chose chocolate than chose vanilla?

F   8

G   6

H   34

J   16

STAAR 2018

31 The bar graph shows a company's income and expenses over the last 5 years.

Income and Expenses
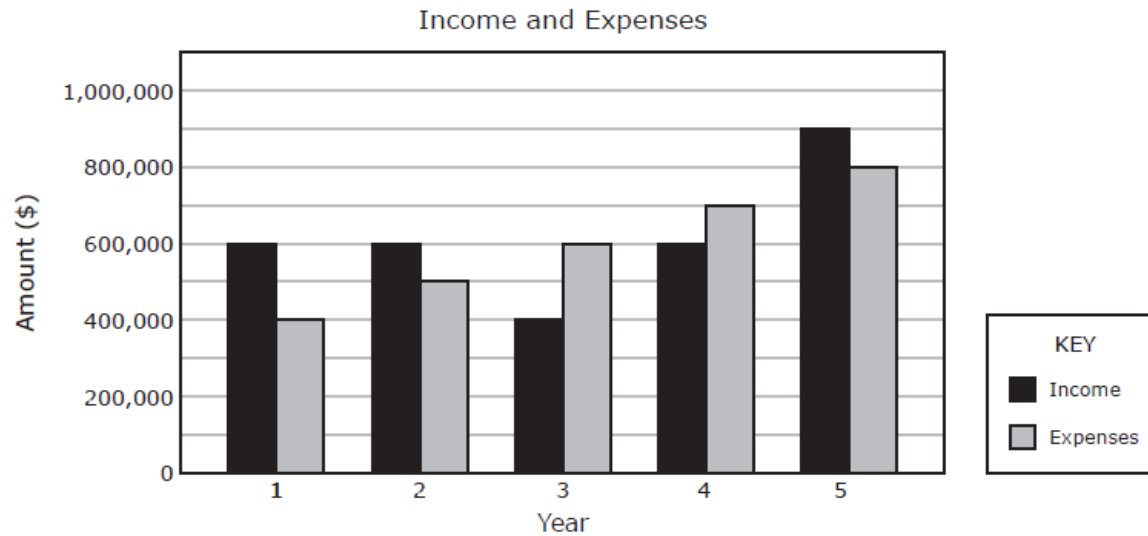
Which statement is supported by the information in the graph?

A Expenses have increased $200,000 each year over the last 5 years.

B The income in Year 5 was twice the income in Year 1.

C The combined income in Years 1, 2, and 3 was equal to the combined expenses in Years 1, 2, and 3.

D The combined expenses in Years 3 and 4 were $300,000 more than the combined income in Years 3 and 4.

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

F A delivery of 3 boxes will contain 3 more defective lightbulbs than a delivery of 2 boxes.

G A delivery of 4 boxes will contain 2 more defective lightbulbs than a delivery of 2 boxes.

H A delivery of 5 boxes will contain 10 more defective lightbulbs than a delivery of 2 boxes.

J A delivery of 6 boxes will contain 3 more defective lightbulbs than a delivery of 2 boxes.

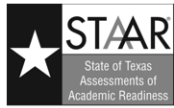**45** Felix has a bucket of golf balls. The table shows the number of golf balls of each color in the bucket.

Golf Balls in a Bucket

Color	Number
Pink	4
White	11
Orange	8
Green	18

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

A The golf ball is more likely to be green than all other colors combined.

B The golf ball is equally likely to be pink, white, orange, or green.

C The golf ball is 2 times as likely to be orange as it is to be pink.

**D** The golf ball is 7 times as likely to be green as it is to be white.

1   Mari bought 6 packets of tomato seeds. Each packet contained 24 seeds. She planted 1 packet of the seeds, and 15 seeds sprouted.

Which statement about the seeds in the remaining packets is best supported by this information?

A   No more than 50 seeds will sprout.

B   Between 50 and 100 seeds will sprout.

C   At least 100 but no more than 120 seeds will sprout.

D   All 120 seeds will sprout.
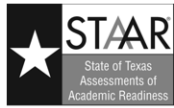
37 Leticia has two bouquets of flowers. Each bouquet contains 13 daisies.

- Bouquet S contains 30 flowers.
- Bouquet T contains 13 flowers.

Which statement is true?

A The probability of randomly selecting a daisy from Bouquet S is less than the probability of randomly selecting a daisy from Bouquet T.

B The probability of randomly selecting a daisy from Bouquet S is 1.

C The probability of randomly selecting a daisy from Bouquet S is equal to the probability of randomly selecting a daisy from Bouquet T.

D The probability of randomly selecting a daisy from Bouquet S is $\frac{1}{3}$.

15 The manager of a movie theater randomly surveyed 50 people who entered the movie theater on Friday. The manager asked about the type of movie each person preferred. The results of the survey are shown in the table.

Survey Results

Type of Movie	Number of People
Horror	12
Comedy	15
Action	17
Drama	6

Based on the results in the table, which statement about a person who will go to this theater next Friday is true?

A The person is three times as likely to prefer comedy as horror.

B The person is twice as likely to prefer drama as horror.

C The person is less likely to prefer horror or drama than action.

D The person is more likely to prefer horror or comedy than action or drama.

21 The 200 students in a school band will attend an awards dinner. A random survey of 25 of these students was conducted to determine how many of each meal should be prepared for the dinner. The results of the survey are shown.

- 12 students want a beef meal.
- 8 students want a chicken meal.
- 5 students want a pasta meal.

Based on the survey results, which of these is the best prediction of the meals wanted by the 200 students?

A There are 16 students who want a beef meal.

B There are 52 students who want either a chicken meal or a pasta meal.

C There are 32 more students who want a beef meal than want a chicken meal.

D There are 24 more students who want a pasta meal than want a chicken meal.

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

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

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

F $\dfrac{2}{5}$

G $\dfrac{2}{45}$

H $\dfrac{1}{25}$

J $\dfrac{1}{5}$

53 On Roberto's shelf are:

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

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

A $\dfrac{1}{3}$

B $\dfrac{1}{18}$

C $\dfrac{1}{5}$

D $\dfrac{1}{6}$

11 Tara has two bags of marbles. The first bag contains 6 red marbles, 5 blue marbles, and 4 green marbles. The second bag contains 3 red marbles, 2 blue marbles, and 4 green marbles. Tara will randomly select 1 marble from each bag.

What is the probability that Tara will select a blue marble from each bag?

A $\dfrac{5}{9}$

B $\dfrac{1}{135}$

C $\dfrac{1}{6}$

D $\dfrac{2}{27}$

28 Rachel is setting up tables for a party. Four of the tables are covered with red tablecloths, and eight of the tables are covered with white tablecloths. Guests will be randomly seated at the tables when they arrive. Each table can seat 8 guests.

What is the probability that the first guest to arrive will be seated at a table with a red tablecloth?

F $\dfrac{1}{2}$

G $\dfrac{1}{3}$

H $\dfrac{1}{4}$

J $\dfrac{1}{8}$

3 A classroom is arranged with 8 seats in the front row, 10 seats in the middle row, and 12 seats in the back row. The teacher randomly assigns seats to students as they enter the classroom.

What is the probability that the first student who enters the classroom will be assigned a seat in the front row?

A $\dfrac{2}{5}$

B $\dfrac{2}{3}$

C $\dfrac{4}{11}$

D $\dfrac{4}{15}$

25 A number cube with faces labeled from 1 to 6 was rolled 20 times. Each time the number cube was rolled, the number showing on the top face was recorded. The table shows the results.

Results

Number Showing on Top Face	Frequency
1	0
2	3
3	3
4	6
5	3
6	5

Based on these results, what is the experimental probability that the next time the number cube is rolled it will land with 5 or 6 showing on the top face?

A $\frac{2}{5}$

B $\frac{3}{20}$

C $\frac{1}{3}$

D $\frac{3}{5}$

7.7A – 2 (R)   **twenty eight W**

27 Which equation best represents the relationship between x and y in the graph?
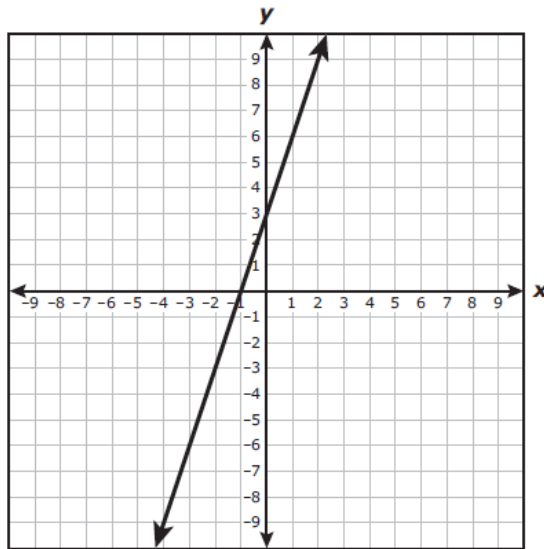
A $y = 3x + 3$

B $y = 3x - 1$

C $y = \dfrac{1}{3}x + 3$

D $y = \dfrac{1}{3}x - 1$

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

A $y = 12x + 55$

B $y = 12x + 165$

C $y = 55x + 12$

D $y = 165x + 12$

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

A

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

C

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

B

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

D

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

7.7A – 2 (R) twenty one Z

16 The table shows the distance, y, a cheetah can travel in feet in x seconds.

Speed of a Cheetah

Time, x (seconds)	Distance, y (feet)
5	470
10	940
15	1,410
20	1,880
25	2,350

Based on the information in the table, which equation can be used to model the relationship between x and y?

F $y = 5x$

G $y = x + 5$

H $y = x + 470$

J $y = 94x$

38 A pilot takes a taxi from the airport to a hotel. The taxi driver charges a $2.50 initial charge plus $2.65 per mile. Which equation can be used to find y, the total cost of the trip, if x represents the number of miles of the trip?

F $y = 2.50x + 2.65$

G $y = 2.65(x + 2.50)$

H $y = 2.65x - 2.50$

J $y = 2.65x + 2.50$

11 The table shows the relationship between y, the cost to rent a boat, and x, the amount of time the boat is rented.

Boat Rental Costs

Time, x (hours)	Cost, y (dollars)
1	32
3	56
5	80
7	104

Which graph best represents the relationship between x and y shown in the table?

A **Boat Rental**

B **Boat Rental**

C **Boat Rental**

D **Boat Rental**
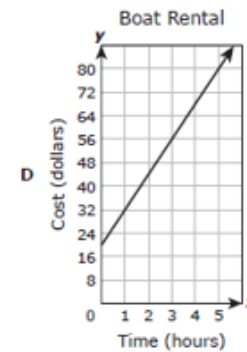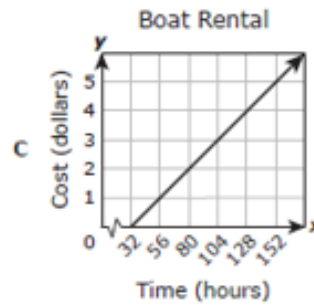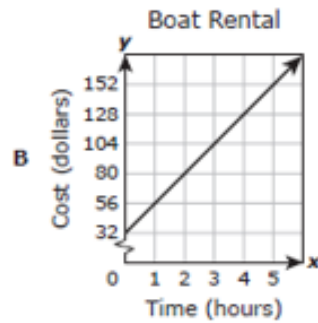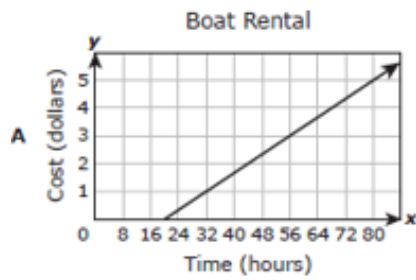
24   A fish is swimming at a constant rate toward the ocean floor. The equation $y = -7x - 3$ can be used to represent this situation, where y is the depth of the fish in meters below sea level and x is the number of seconds the fish has been swimming.

Which statement best describes the depth of the fish, given this equation?

F   From a starting position of 7 meters below sea level, the fish is descending 3 meters per second.

G   From a starting position of 7 meters below sea level, the fish is ascending 3 meters per second.

H   From a starting position of 3 meters below sea level, the fish is descending 7 meters per second.

J   From a starting position of 3 meters below sea level, the fish is ascending 7 meters per second.

7.9A – 3 (R)   **thirty one X**

14 The dimensions of a triangular prism are shown in the diagram.
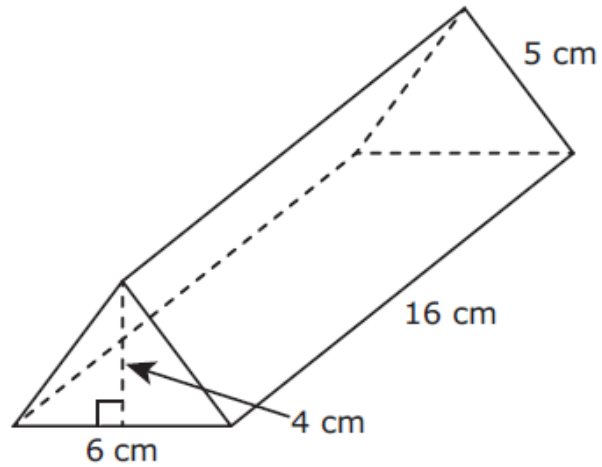
What is the volume of the triangular prism in cubic centimeters?

F 480 cm^3

G 192 cm^3

H 240 cm^3

J 384 cm^3

31 Alina drew a model of a square pyramid. The dimensions of the model are shown in the diagram.
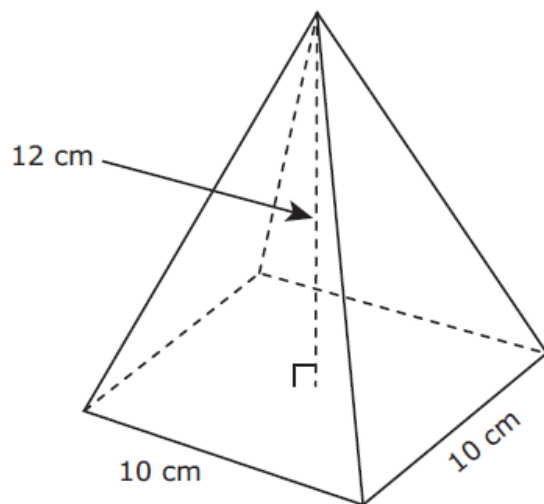
What is the volume of Alina's model in cubic centimeters?

A 400 cm^3

B 1,200 cm^3

C 600 cm^3

D 160 cm^3

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

A 17 ft

B 34 ft

C 8.5 ft

D Not here

13 Two identical number cubes are shown in the picture. The edge length of these number cubes is 3 centimeters.
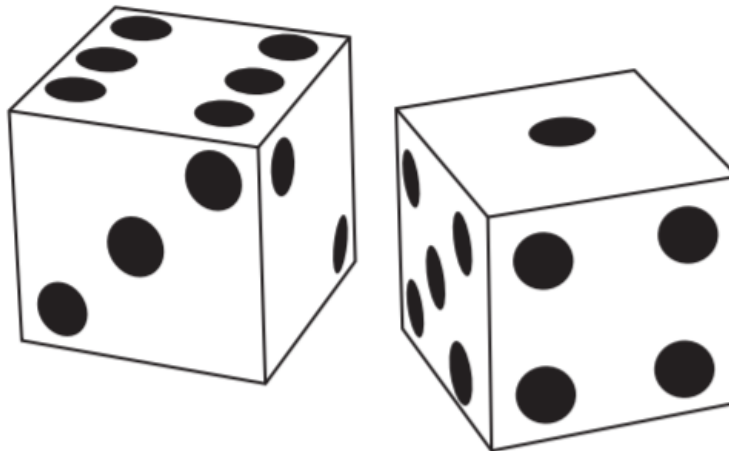
What is the combined volume of the two number cubes in cubic centimeters?

A 54 cm^3

B 18 cm^3

C 9 cm^3

D 27 cm^3

22 A pencil holder shaped like a triangular prism is shown in the picture. The height of the pencil holder is 12 cm, and the volume of the pencil holder is 216 cm^3.

Grades 6–8 Mathematics

What is the area of the base of the pencil holder in square centimeters?

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

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

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

F 1,360 cm^3

G 408 cm^3

H 1,632 cm^3

J 816 cm^3

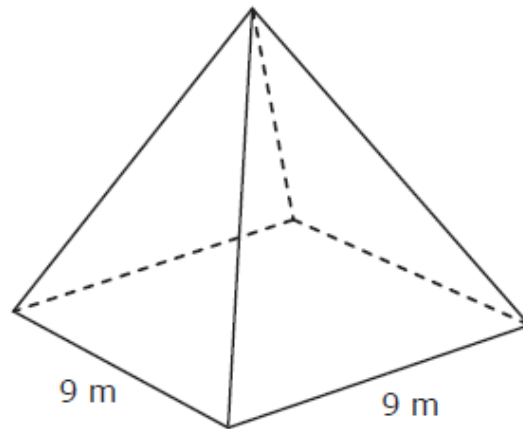**39** Some of the dimensions of a square pyramid are shown in the diagram. The height of the square pyramid is 7.5 meters.

What is the volume of the square pyramid in cubic meters?

A 202.5 m^3

B 303.75 m^3

C 270 m^3

D 243 m^3

9 A group of students stood in a circle to play a game. The circle had a diameter of 22 meters. Which measurement is closest to the circumference of the circle in meters?

A 34.54 m

B 1,519.76 m

C 379.94 m

D 69.08 m

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

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

A 94.2 in.^{2}

B 188.4 in.^{2}

C 706.5 in.^{2}

D 286.6 in.^{2}

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

F 18.84 ft^2

G 28.26 ft^2

H 37.68 ft^2

J 113.04 ft^2

8 A circular tablecloth has a radius of 2.5 feet. Kyle is sewing a piece of ribbon around the edge of the tablecloth. If Kyle has exactly enough ribbon, which measurement is closest to the length of the piece of ribbon in feet?

F 7.85 ft

G 15.7 ft

H 19.63 ft

J 31.4 ft

32 A rotating lawn sprinkler sprays water in a circular area of grass, as shown in the picture. The diameter of the circular area of grass is 16 ft.
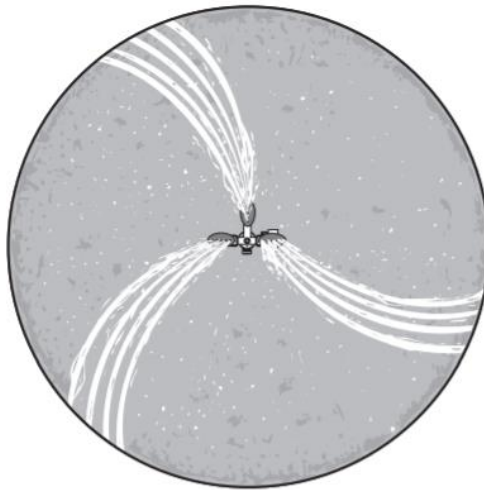
Which measurement is closest to the area in square feet that this sprinkler sprays with water?

F 100.48 ft^2

G 50.24 ft^2

H 200.96 ft^2

J 803.84 ft^2

7.9B – 3 (R)   **twenty six W**

2   An observatory is shaped like a cylinder standing on one of its bases with a dome on top. The
    diameter of the floor of the observatory is 64 feet, as shown in the diagram.
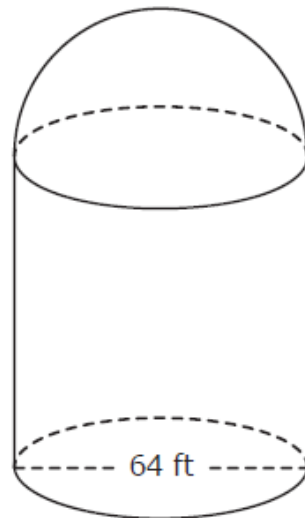
Which measurement is closest to the circumference of the base of the observatory in feet?

F   200.96 ft
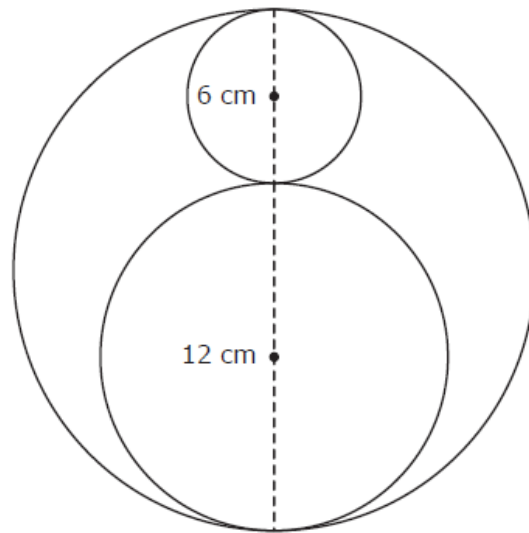
G   3,215.36 ft

H   100.48 ft

J   401.92 ft

23 A company's logo was designed using circles of 3 different sizes. The diameters of two of the circles are shown.

6 cm

12 cm

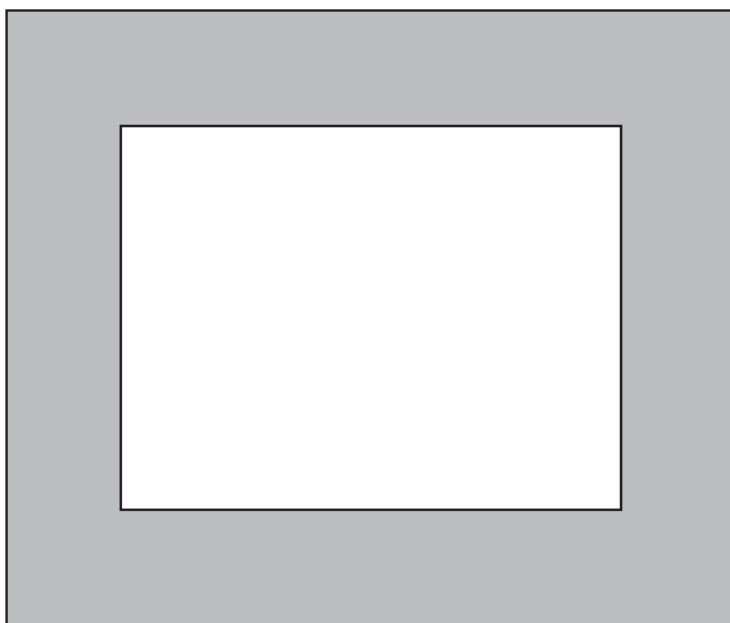Which measurement is closest to the area of the largest circle in square centimeters?

A 56.52 cm²

B 141.30 cm²

C 1,017.36 cm²

D 254.34 cm²

16 Two rectangles were used to form the following figure. Use the ruler provided to measure the dimensions of the figure to the nearest quarter of an inch.
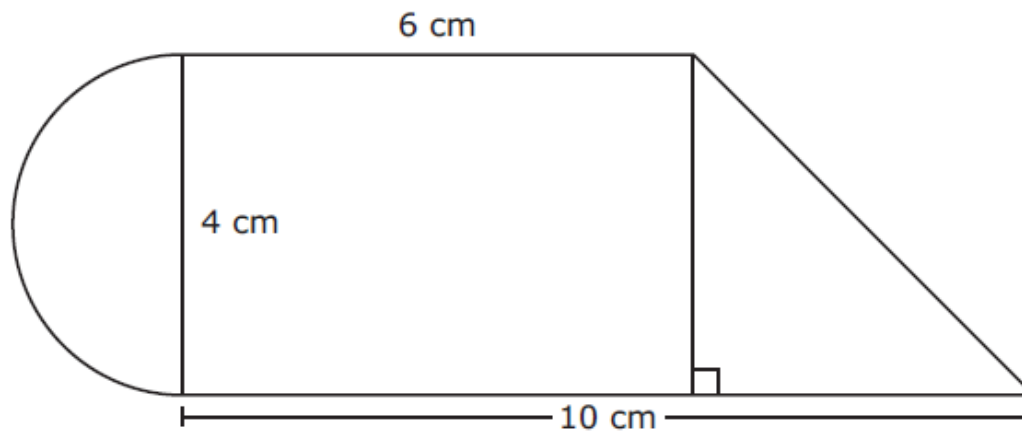
Which measurement is closest to the area of the shaded region of this figure in square inches?

F 19 in.^{2}

G 11 in.^{2}

H 6 in.^{2}

J 8 in.^{2}

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

6 cm

4 cm

10 cm

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

A 52 cm^2

B 44 cm^2

C 26 cm^2

D 38 cm^2

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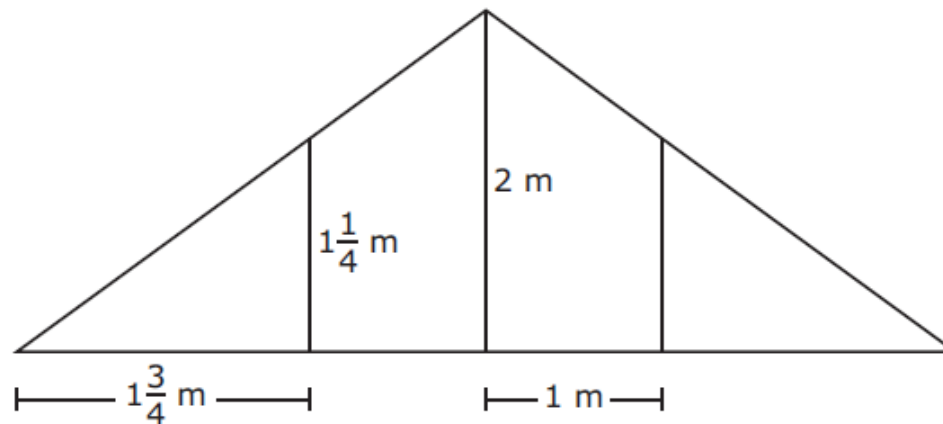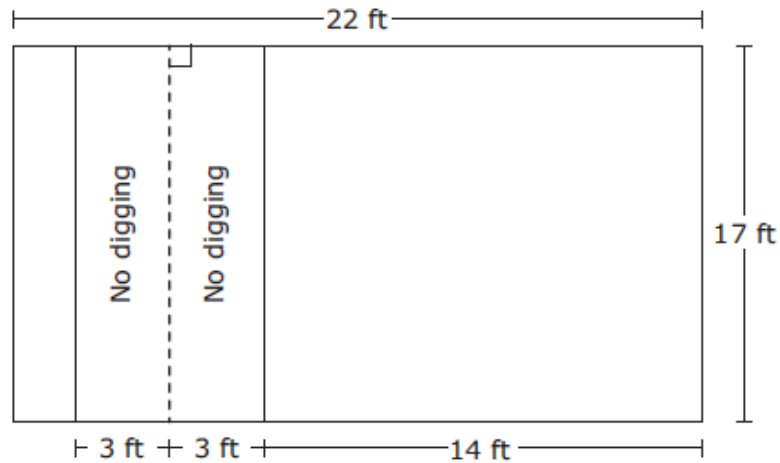

Which measurement is the best estimate of the area of the banner in square meters?

F 6 m^2

G 15 m^2

H 8 m^2

J 10 m^2

4 A utility line runs underground through Shayne's rectangular backyard. Shayne is not allowed to dig within 3 feet of the utility line. The diagram below shows the dimensions of Shayne's backyard in feet. The dashed line represents the utility line.
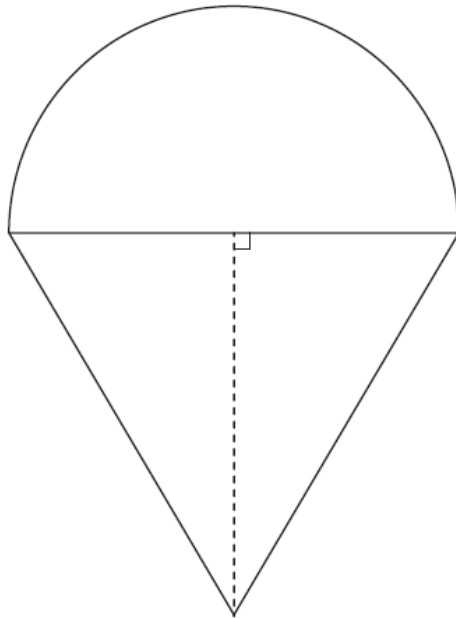

What is the area in square feet of the part of the backyard in which Shayne is allowed to dig?

F 272 ft^2

G 374 ft^2

H 102 ft^2

J 59 ft^2

19 A figure was created using a triangle and a semicircle. Use the ruler provided to measure the
dimensions of the triangle and the semicircle to the nearest centimeter.

Which measurement is closest to the area of the figure in square centimeters?

A 78 cm^2

B 81 cm^2

C 106 cm^2

D 53 cm^2
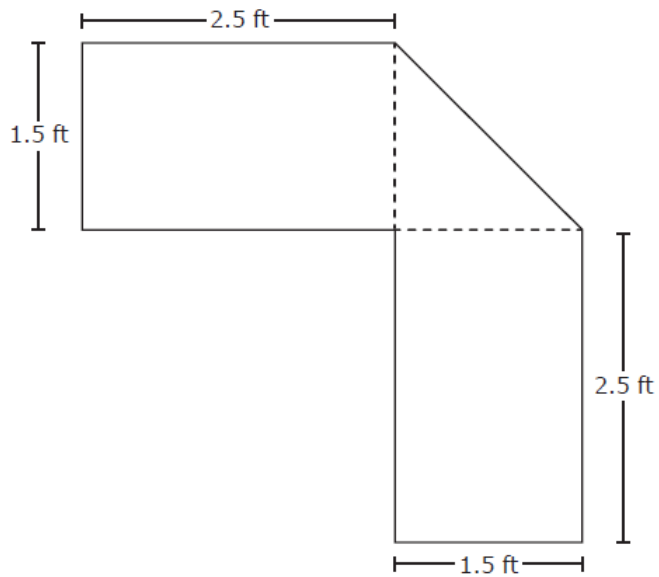
7.9C – 3 (R)   **twenty nine X**

14 The top surface of a desk is composed of 2 rectangles and a triangle. Some side lengths of the top surface of the desk are shown.

What is the area of the top surface of the desk in square feet?

F   9.75 ft^2

G   8.625 ft^2

H   7.50 ft^2

J   9.375 ft^2

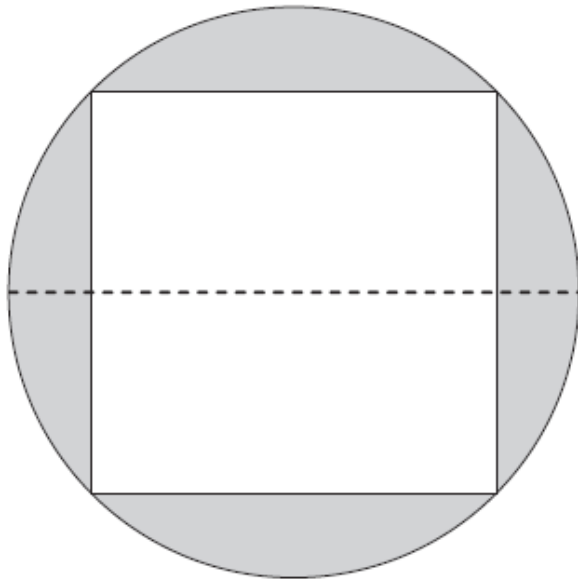**2018**

34 The figure shown was created by placing the vertices of a square on the circle. Use the ruler provided to measure the dimensions of the square and the circle to the nearest centimeter.

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

F 17.6 cm^2

G 265.0 cm^2

H 29.5 cm^2

J 127.5 cm^2

7.11A – 2 (R)   **thirty three Z**

4 An equation is modeled.

What value of *x* makes the equation true?

F 1

G 7

H −5

J −1

20 Walter and Brian each have a CD collection.

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

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

F 108

G 48

H 72

J 36

44   What is the value of x in this equation?

$$2x + 2 = -52$$

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.
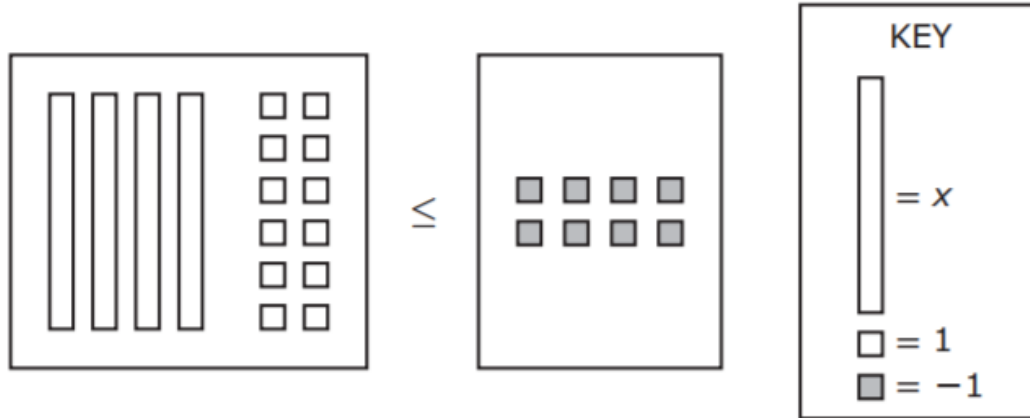
Grades 6–8 Mathematics

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State of Texas
Assessments of
Academic Readiness

18 The model represents an inequality.

What is the solution set for the inequality?

F $x \leq -5$

G $x \leq 5$

H $x \leq 1$

J $x \leq -14$
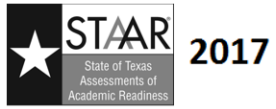
27 What is the solution to this equation?

$$30.16 = 17.56 + 5x$$

A 6.032

B 3.512

C 12.6

D 2.52

7 What is the solution set for $-4x - 10 \leq 2$?

   A $x \leq -3$
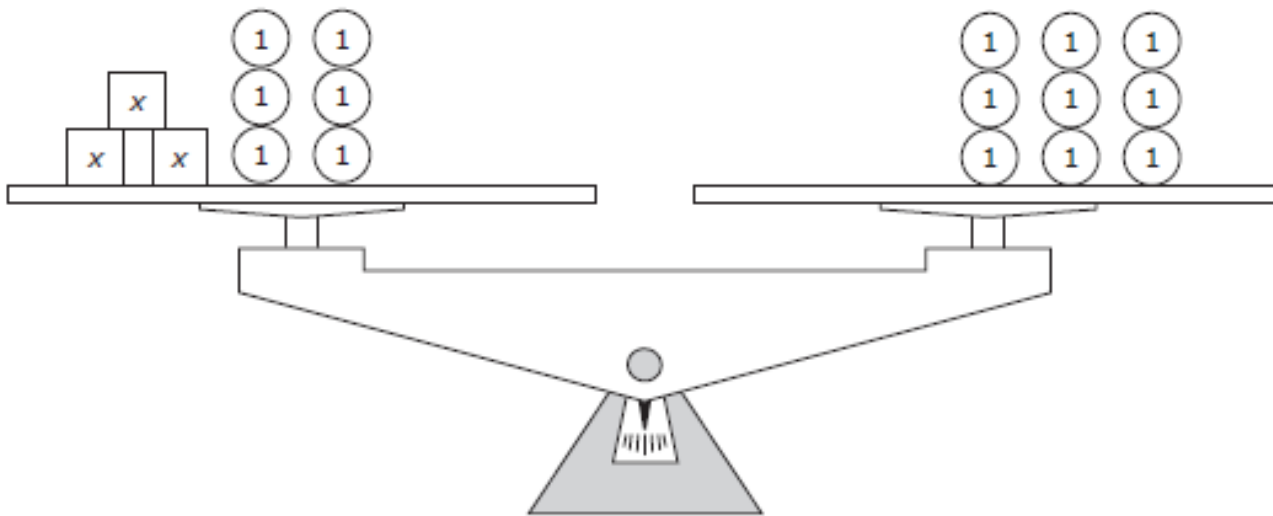
   B $x \geq -3$

   C $x \leq 2$

   D $x \geq 2$

28   The model represents an equation.
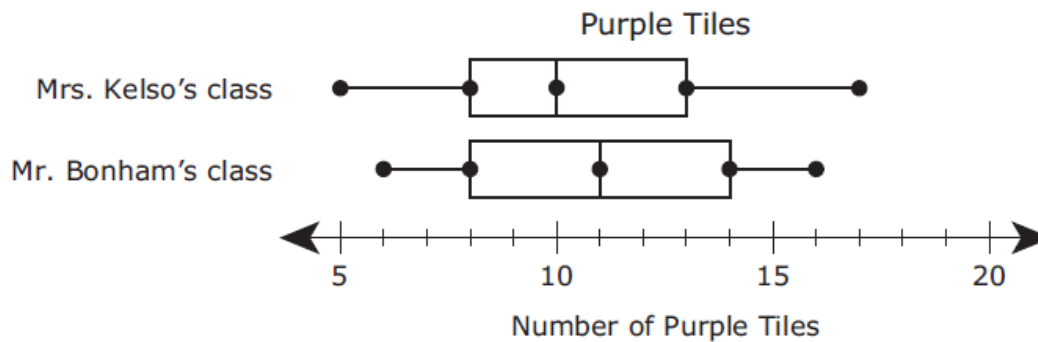

What is the solution for this equation?

F   x = 3

G   x = 15

H   x = 5

J   x = 1

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

Purple Tiles

Number of Purple Tiles

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

A The range of the data for Mr. Bonham's class is less than the range of the data for Mrs. Kelso's class.

B The data for Mrs. Kelso's class are more symmetrical than the data for Mr. Bonham's class.

C The median number of the data for Mr. Bonham's class is less than the median number of the data for Mrs. Kelso's class.

D The interquartile range of the data for Mrs. Kelso's class is greater than the interquartile range of the data for Mr. Bonham's class.

2016

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

Mrs. Anderson's Class   Mrs. Murphy's Class

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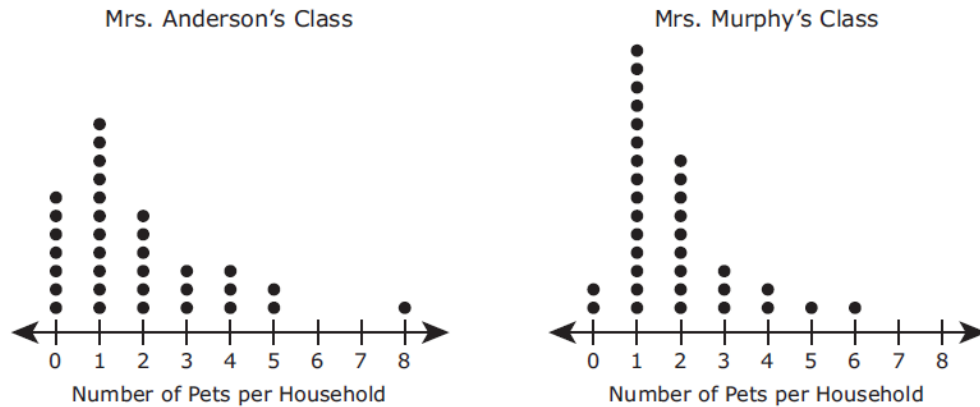
Here are three statements about the number of pets per household for these two classes.

    I.   The range of the number of pets per household for Mrs. Murphy's class is greater than the range of the number of pets per household for Mrs. Anderson's class.

    II.   The distribution of the data is approximately symmetrical in both sets of data.

    III.   The mode of the number of pets per household for Mrs. Anderson's class is equal to the mode of the number of pets per household for Mrs. Murphy's class.
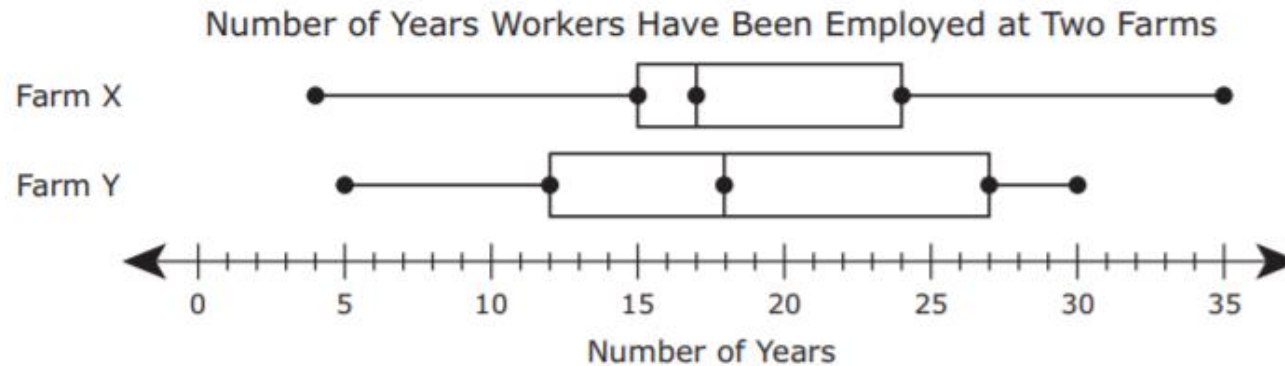
Which of these three statements appear to be true?

A   I only

B   I and III

C   II and III

D   III only

6 The box plots show data about the number of years that farmworkers have been employed at each of two farms.

Number of Years Workers Have Been Employed at Two Farms

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

F The range of the data for Farm Y is equal to the range of the data for Farm X.

G The third quartile of the data for Farm Y is less than the third quartile of the data for Farm X.

H The median of the data for Farm Y is greater than the median of the data for Farm X.

J The first quartile of the data for Farm Y is greater than the first quartile of the data for Farm X.

2017

34 The dot plots show the heights of the players on two basketball teams.

Team A

Height (inches)

Team B

Height (inches)
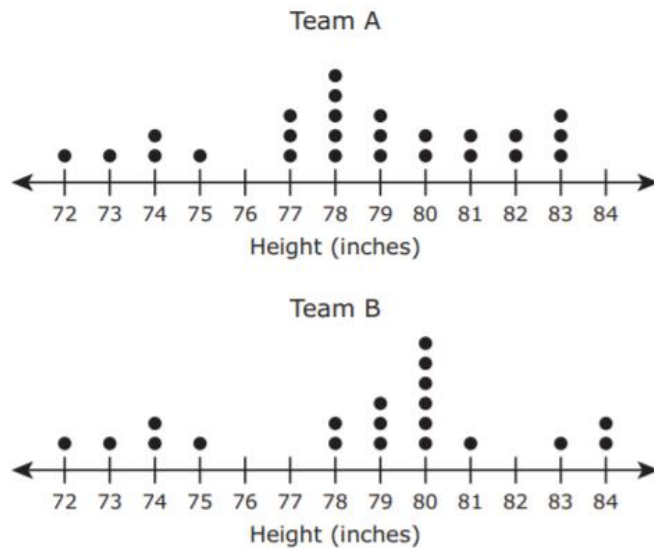
Which statement is best supported by these data?

F The distributions of the data for Team A and Team B are approximately symmetrical.

G The median height of the players on Team B is less than the median height of the players on Team A.

H Team B has a greater range in player heights than Team A has.

J The mode height of the players on Team B is less than the mode height of the players on Team A.
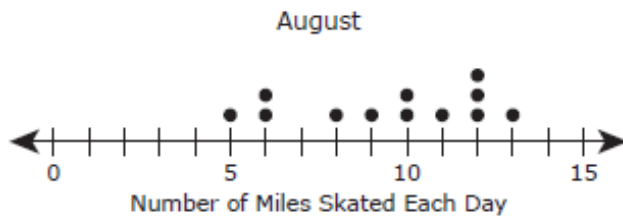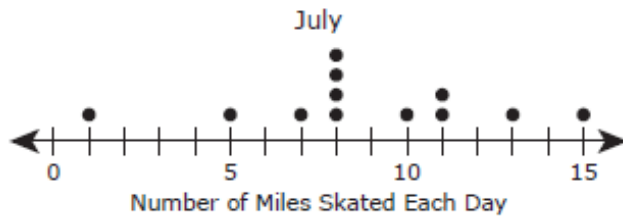
13 The dot plots show the numbers of miles Ian skated on several days in two different months.

July

Number of Miles Skated Each Day

August

Number of Miles Skated Each Day

Which statement is supported by the information in the dot plots?

A The least number of miles Ian skated on a day in July is greater than the least number of miles Ian skated on a day in August.

B The median number of miles Ian skated each day in July is greater than the median number of miles Ian skated each day in August.

C The mode of the number of miles Ian skated each day in July is less than the mode of the number of miles Ian skated each day in August.

D The range of the number of miles Ian skated each day in July is less than the range of the number of miles Ian skated each day in August.
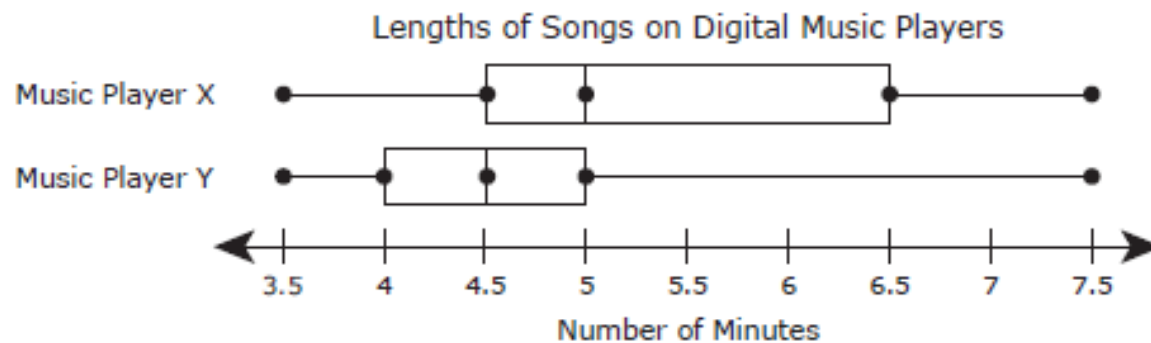
36 The box plots show the lengths of the songs on two digital music players in minutes.

Lengths of Songs on Digital Music Players

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

F The interquartile range of the data for Music Player X is equal to the interquartile range of the data for Music Player Y.

G The interquartile range of the data for Music Player X is greater than the interquartile range of the data for Music Player Y.

H The median length of the songs on Music Player X is equal to the median length of the songs on Music Player Y.

J The median length of the songs on Music Player X is less than the median length of the songs on Music Player Y.