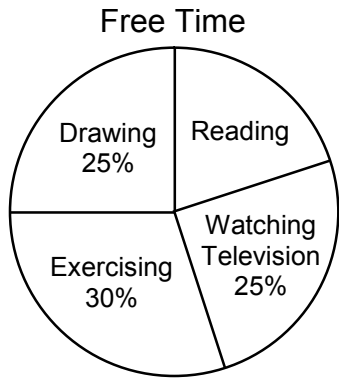


1 Nathaniel created the circle graph below to show the percentage of his free time he will engage in different activities on Sunday.



If Nathaniel has 9 hours of free time on Sunday, which shows the amount of time he will spend reading?

- A 1 hour 8 minutes
- B 1 hour 35 minutes
- C 1 hour 21 minutes
- D 1 hour 48 minutes

7.6G

2 Chelsea sprinted 150 yards in 21.5 seconds. One meter is approximately equal to 1.1 yards. Which measurement is closest to the number of meters Chelsea sprinted?

- F 19.4 yd H 23.65 yd
- G 165 yd J 136.4 yd

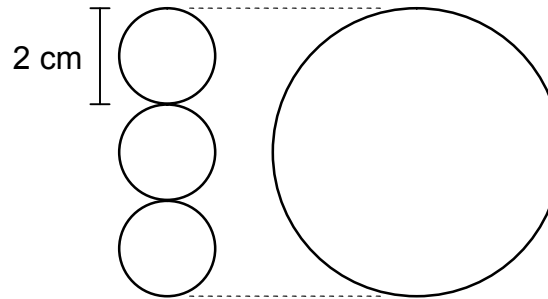
7.4E

3 Montel uses 8 ounces of sugar to make 36 fluid ounces of lemonade. If he makes 108 fluid ounces of lemonade to bring to a party, how many ounces of sugar will he use?

- A 11 B 18 C 13.5 D Not here

7.4D

4 Gina drew three small congruent circles beside one large circle.

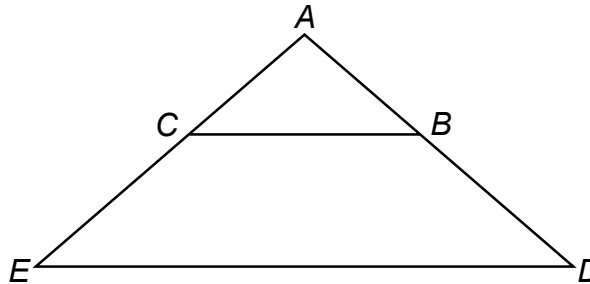


Based on the diagram, which answer choice is closest to the area of the large circle?

- F 28.3 cm^2 H 18.8 cm^2
- G 12.6 cm^2 J 24.4 cm^2

7.9B

5 Triangles ABC and ADE are similar.



Which proportion must be true?

- A $\frac{AD}{DE} = \frac{AB}{AC}$ C $\frac{BD}{DE} = \frac{AB}{CE}$
- B $\frac{BC}{DE} = \frac{AC}{AE}$ D $\frac{DE}{BC} = \frac{BD}{AE}$

7.5A

6 Felix asked some students in the cafeteria to name a favorite salad item. He recorded the results below.

Item	Students
Lettuce	6
Tomato	16
Cucumber	9
Carrot	4
Radish	3

One student will be chosen at random. Based on the data in the table, which statement is true?

- F The student's favorite item is 7 times as likely to be tomato as it is to be cucumber.
- G The student's favorite item is 4 times as likely to be tomato as it is to be lettuce.
- H The student's favorite item is 3 times as likely to be cucumber as it is to be radish.
- J The student's favorite item is 2 times as likely to be lettuce as it is to be carrot.

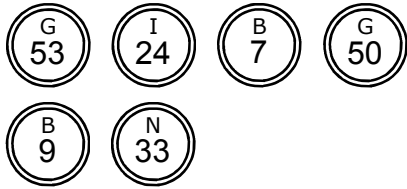
7.6H

7 When the value of x is -3 , which inequality is true?

- A $-6x - 16.5 < 1.5$
- B $-4x - 2.5 > 9.5$
- C $-2.5x + 0.25 \geq 7.75$
- D $-1.2x - 1.5 \leq 2.05$

7.11B

1 Robert will choose one bingo ball shown below at random.

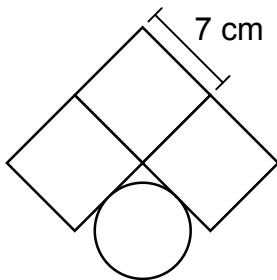


Which statement is true?

- A He is more likely to choose a composite number than a prime number.
- B He is three times as likely to choose a composite number as a prime number.
- C He is equally likely to choose either a composite number or a prime number.
- D He is twice as likely to choose a prime number as a composite number.

7.6H

2 Halima drew the design below using three congruent squares and one circle.

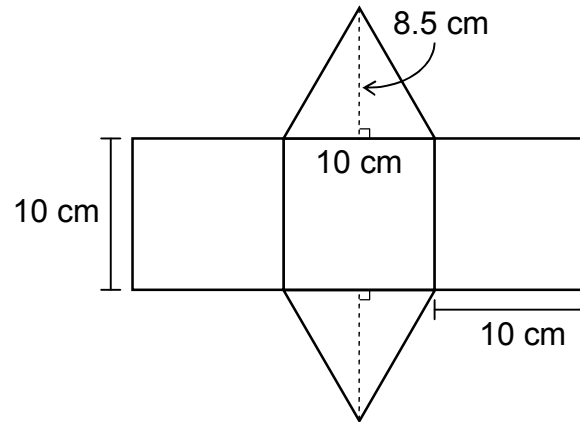


Which measurement is closest to the area of the circle?

- F 50 cm^2 H 36 cm^2
- G 136 cm^2 J 150 cm^2

7.9B

3 The net of a triangular prism is shown below.



What is the total surface area of the prism?

- A 470 cm^2 C 390.5 cm^2
- B 385 cm^2 D 342.5 cm^2

7.9D

4 The table shows the grade level and number of students participating in a dance class after school.

Grade Level	Number of Students
6 th	63
7 th	44
8 th	25

If the dance instructors choose one student at random to assist them, what is the probability the chosen student will **not** be a seventh grader?

- F $\frac{2}{3}$ G $\frac{1}{2}$ H $\frac{3}{4}$ J $\frac{1}{3}$

7.6I

5 Wyatt had one sack that contained some colored golf balls and another sack that contained different lengths of golf tees. He pulled out one golf ball and one tee at random and recorded the result on a table. He conducted this experiment 8 times with replacement after each trial.

	Ball Color	Tee Length
Trial #1	yellow	short
Trial #2	orange	short
Trial #3	white	long
Trial #4	white	short
Trial #5	white	long
Trial #6	yellow	long
Trial #7	white	short
Trial #8	orange	long

Based on the information in the table, what is the experimental probability of Wyatt pulling out a white ball then a short tee?

- A $\frac{1}{2}$ B $\frac{1}{8}$ C $\frac{1}{4}$ D $\frac{1}{6}$

7.6I

6 Konyi wrote the equation below.

$$3\frac{5}{8} \div \frac{3}{4} = \square$$

Which number makes the equation true?

- F $3\frac{1}{2}$ G $3\frac{5}{8}$ H $4\frac{1}{3}$ J $4\frac{5}{6}$

7.3A

1 The table shows the color and number of tacks Ms. Greer keeps in a drawer.

Color	Number
Brown	
Green	
Yellow	
White	

If she pulls one tack out of the drawer at random, which statement is true?

- A The tack is equally likely to be either brown or white.
- B It is certain that the tack will be yellow.
- C The tack is more likely to be green than white.
- D It is impossible that the tack will be red.

7.6H

2 Isabel created the table of x and y values shown here.

x	0	2	4	6
y	4	9	14	19

Which equation represents the relationship between the x values and the y values in Isabel's table?

- F $y = 4x + 4$
- G $y = 2x + 4$
- H $y = 2.5x + 4$
- J $y = 4x + 1$

7.7A

3 Mitchell completes 0.8 sculptures per week. Which table shows the sum of the number of sculptures that Mitchell can complete in 4 weeks?

A

Week	1	2	3	4
Total Sculptures	0.2	0.4	0.6	0.8

B

Week	1	2	3	4
Total Sculptures	0.8	1.6	2.4	3.2

C

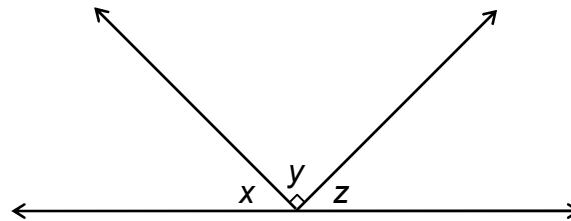
Week	1	2	3	4
Total Sculptures	0.8	1.4	2.0	2.6

D

Week	1	2	3	4
Total Sculptures	0.4	0.8	1.2	1.6

7.4A

4 In the diagram below, angle x is congruent to angle z .



Which equation can be used to find the measure of angle x ?

- F $2x + 90 = 180$
- G $x + 90 = 180$
- H $2x - 90 = 180$
- J $x - 90 = 180$

7.11C

5 When the value of x is -48 , which equation is true?

- A $24 + \frac{1}{2}x = 12$
- B $\frac{x}{2} - 4 = -22$
- C $\frac{x}{3} - 4 = -20$
- D $18 + \frac{1}{3}x = 34$

7.11B

6 At Mr. Garza's florist shop, $1\frac{1}{2}$ dozen roses cost \$38.70. In dollars and cents, what is the cost of a single rose?

					.		
+	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

7.4B

7 Six out of the first ten vehicles that entered a parking lot were cars. Based on this information, if five hundred forty vehicles entered the parking lot, how many vehicles could be expected to be cars?

- F 296
- G 312
- H 340
- J 324

7.6C

1 Elaine cannot spend more than \$90 each month for her cell phone and text messaging service. Her plan states that she has to pay a set fee of \$45 for phone service and \$0.05 per text message she sends. Which inequality represents the relationship between the number of text messages she can send each month, t , and the total amount she can spend for the cell phone and text messaging service?

- A** $90 \geq 45t + 0.05$
- B** $90 \geq 45 + 0.05t$
- C** $90 \leq 45t + 0.05$
- D** $90 \leq 45 + 0.05t$

7.10A

2 The number of donuts a bakery makes has a proportional relationship with the number of muffins it makes.

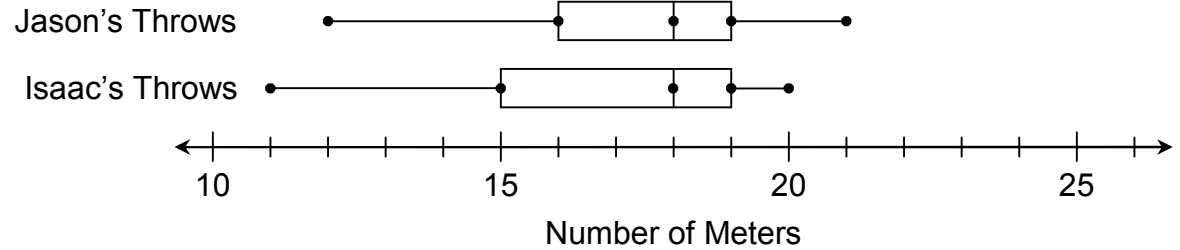
Muffins (x)	Donuts (y)
72	108
108	162
144	216
156	234

What is the constant of proportionality that relates the number of donuts, y , to the number of muffins, x ?

- F** 3.6 **G** 1.75 **H** 2.5 **J** 1.5

7.4C

3 Jason and Isaac each threw a javelin ten times. They recorded the distances of their throws on the box plot below.

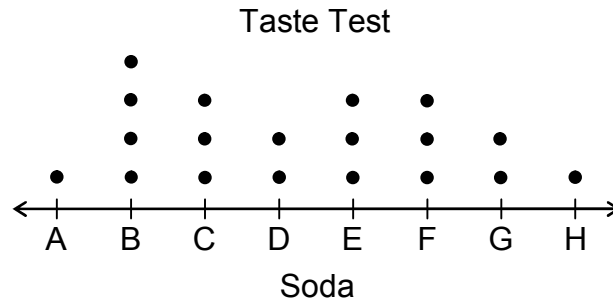


Which statement is true?

- A** The range of Jason's data is less than the range of Isaac's data.
- B** The median number of Jason's data is greater than the median number of Isaac's data.
- C** The interquartile range of Jason's data is less than the interquartile range of Isaac's data.
- D** Jason's data are symmetrical while Isaac's data are not symmetrical.

7.12A

4 During a blind taste test of 8 different sodas, some people were asked to choose a favorite. Each dot represents one person.



If the ratio of people choosing B to people choosing H stays the same, how many people will choose H if the number of people who choose B increases to 20?

- F** 6 **G** 4 **H** 5 **J** 3

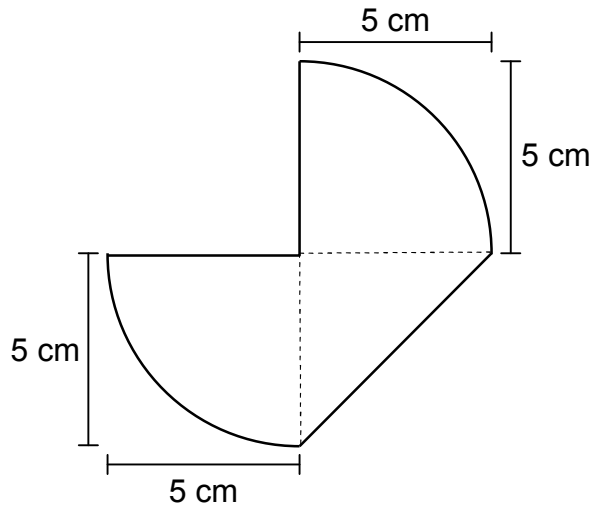
7.6G

5 Azim wants to buy a tablet computer that is priced at \$255.25. If the sales tax rate on the computer is 8%, how many dollars and cents will Azim spend on the sales tax only?

+	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

7.13A

1 The figure below is composed of two quarter circles and one right triangle.



Which measurement is closest to the area of the figure?

- A 32.1 cm²
- B 39.3 cm²
- C 51.8 cm²
- D 55.4 cm²

7.9C

2 Rashida keeps her collection of 162 books on three shelves.

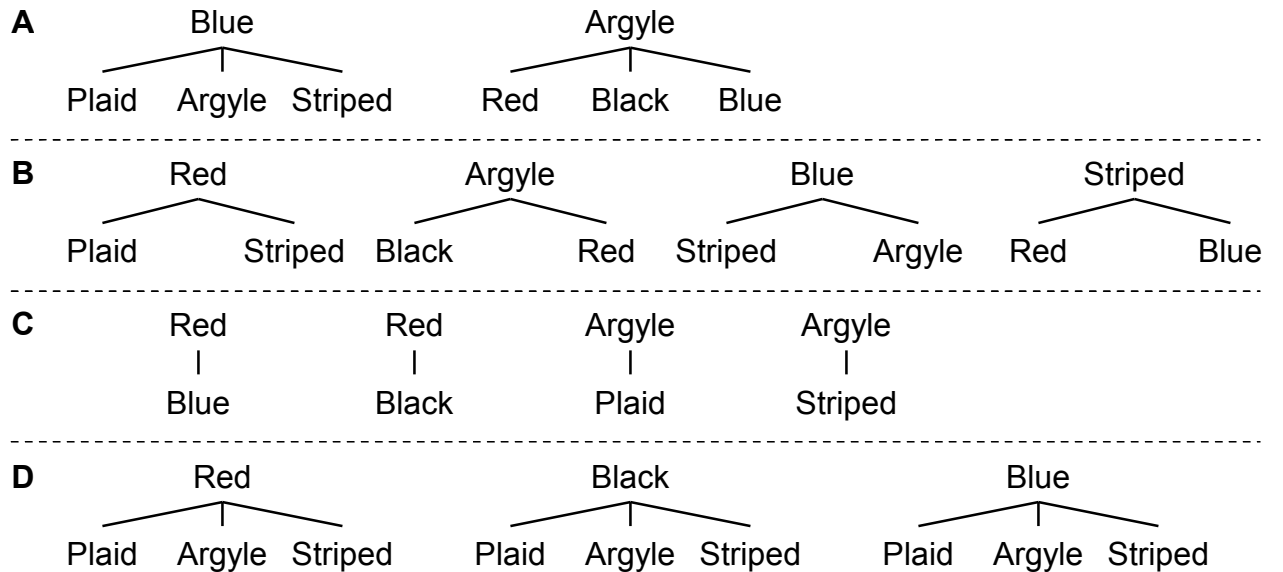
- There are 42 books on the first shelf.
- There are x books on the second shelf.
- The number of books on the third shelf is 2 times the number of books on the second shelf.

What is the value of x , the number of books on the second shelf?

- F 60
- G 80
- H 40
- J 120

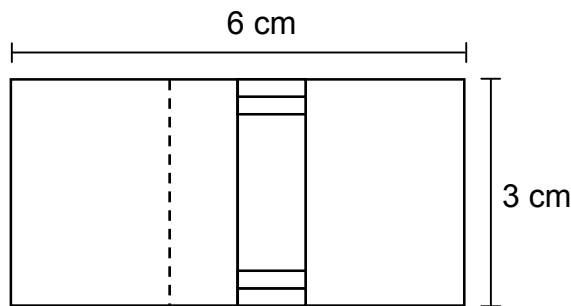
7.11A

3 Gerald will choose a color of shirt and a style of tie to wear today. He can choose from a red, black, or blue shirt. He can choose from a plaid, argyle, or striped tie. Which diagram shows all of the possible combinations of 1 color of shirt and 1 style of tie?



7.6A

4 David drew a scaled down model of a racquetball court he played on last week.



Scale
0.5 cm = 1 m

What is the actual perimeter of the court David played on last week?

- F 54 meters
- G 18 meters
- H 9 meters
- J 36 meters

7.5C

5 A certain model of coffee bean roaster can process 660 pounds of coffee in 12 hours. At this rate, how many pounds of coffee can the roaster process in 36 hours?

					.		
+	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

7.4D

1 The table shows the type and number of chess pieces that are in a bag.

Type	Number
King	1
Queen	1
Rook	2
Bishop	2
Knight	2
Pawn	8

Danika will choose a piece at random and then replace it. Then she will choose a second piece at random. What is the probability that Danika will choose a king first and a pawn second?

- A $\frac{3}{8}$ B $\frac{9}{16}$ C $\frac{1}{128}$ D $\frac{1}{32}$

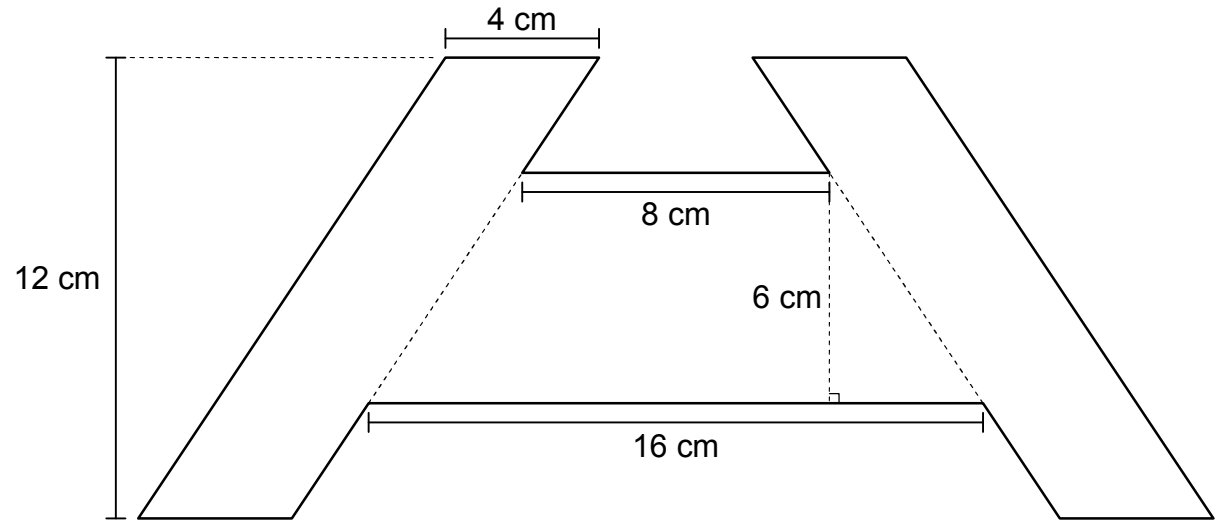
7.61

2 Ms. Young acquired a loan of \$36,400 at her local bank. The loan has a simple interest rate of 8% per year. What is the amount of interest that Ms. Young will be charged on the loan at the end of 3 years?

- F \$45,136 H \$2,912
G \$12,133 J \$8,736

7.13E

3 The figure below is composed of two congruent parallelograms and one trapezoid.



What is the area of the figure?

- A 192 cm² B 168 cm² C 120 cm² D 148 cm²

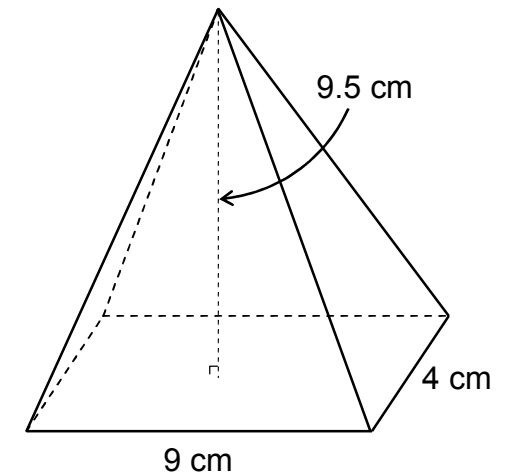
7.9C

4 A jeweler has 121.92 centimeters of gold chain. He will use $\frac{1}{2}$ of the chain to make a necklace. He will make 3 bracelets with the remaining chain. If each bracelet is the same length, what will be the length of each bracelet in centimeters?

					.		
+	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

7.3B

5 A model of a rectangular pyramid is shown here.

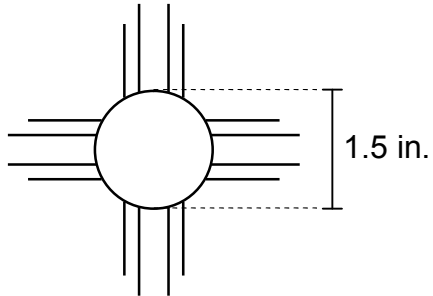


What is the volume of the pyramid?

- F 342 cm³ H 114 cm³
G 171 cm³ J Not here

7.9A

1 Angelica drew a Zia symbol on her notebook.

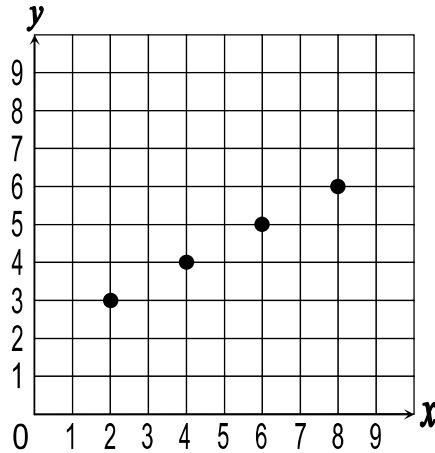


Which answer choice is closest to the circumference of the circle in the center of the symbol?

- A 4.7 inches
- B 10.2 inches
- C 1.1 inches
- D 1.8 inches

7.9B

3 Nikita plotted 4 points on the grid below.

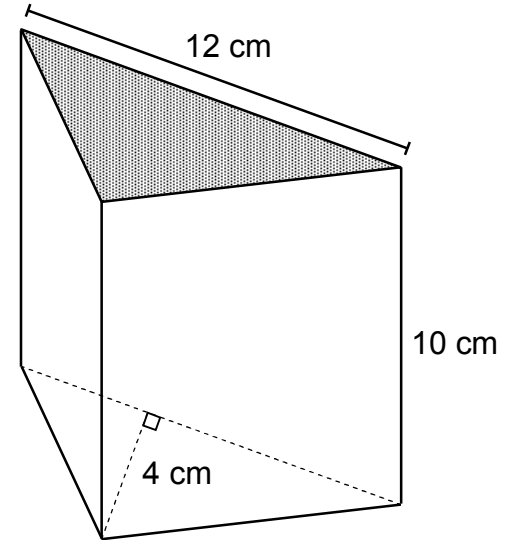


Which equation represents the relationship between the x values and the y values of the plotted points?

- A $y = 2x - 1$
- B $y = 0.5x + 2$
- C $y = 2x + 1$
- D $y = 3x - 3$

7.7A

4 A wooden block has the dimensions shown here.

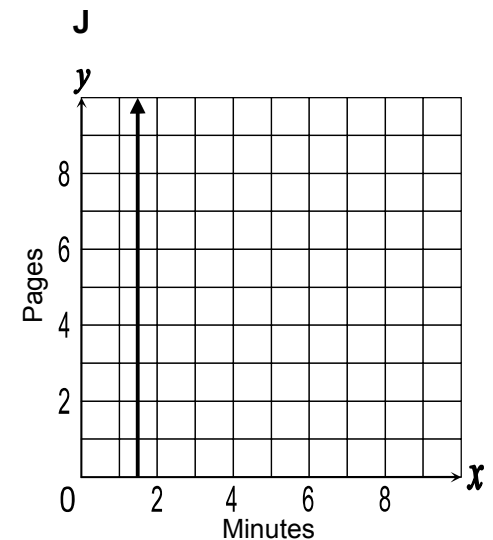
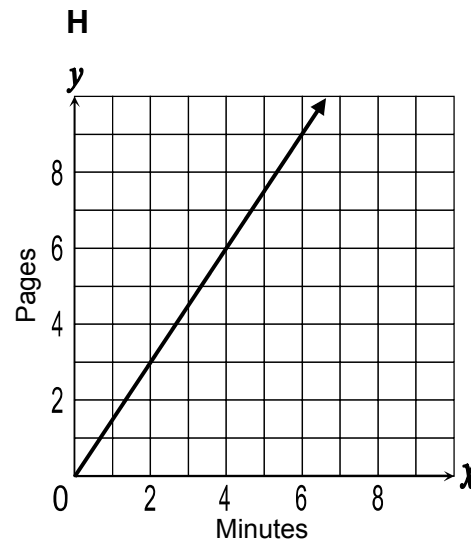
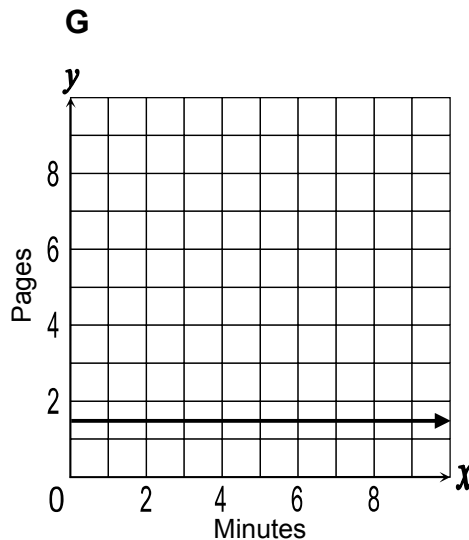
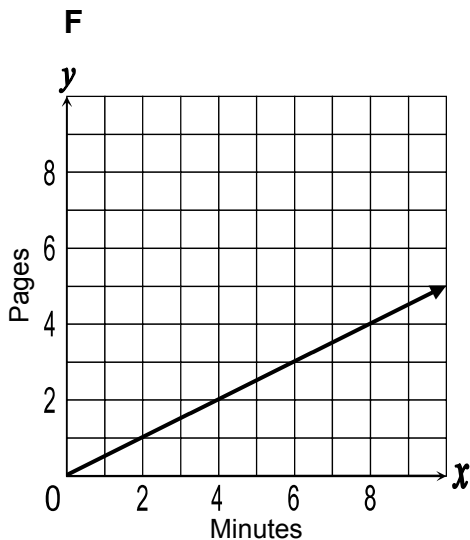


What is the volume of the block?

- F 80 cm^3
- G 240 cm^3
- H 320 cm^3
- J 480 cm^3

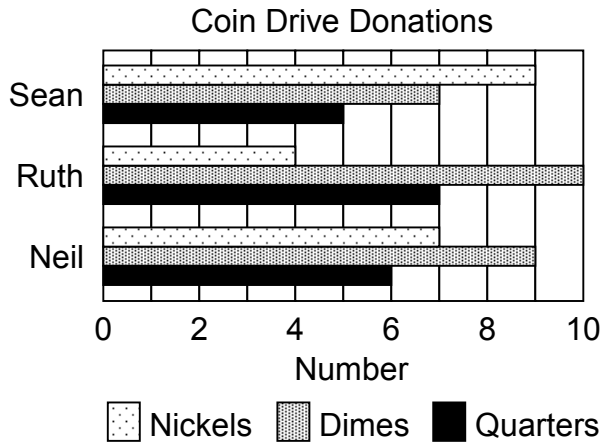
7.9A

2 Miguel reads his book at a constant rate of 1.5 pages per minute. Which graph best represents y , the total number of pages Miguel reads in x minutes?



7.4A

1 The graph shows the type and number of coins that three students plan to donate during a coin drive fundraiser.

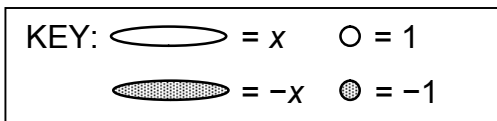
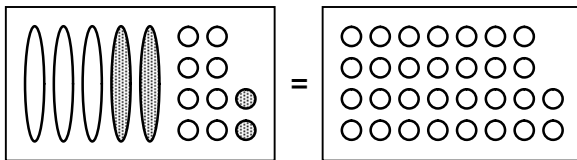


If the total number of nickels the students donate is increased to 30, how many dimes should they donate to keep the ratio of total nickels to total dimes the same?

- A** 35 **B** 37 **C** 39 **D** 41

7.6G

2 Adrian drew the model below to represent an equation.

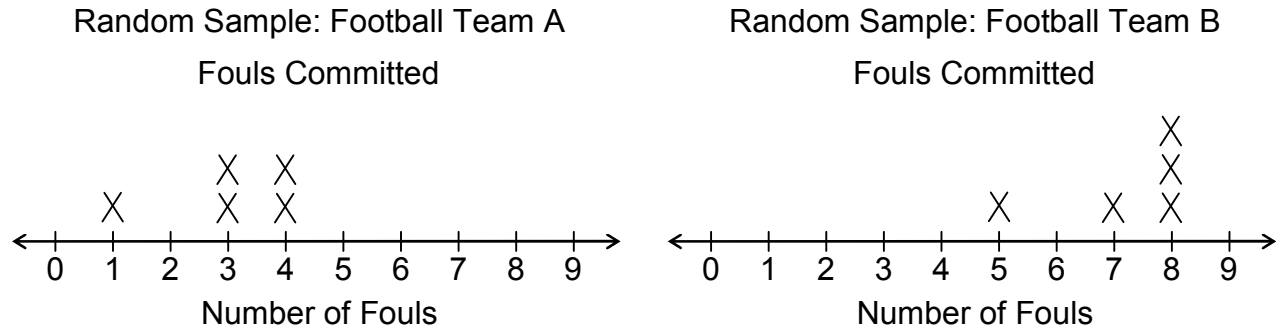


What value of x makes the equation true?

- F** 26 **G** 5 **H** 24 **J** 6

7.11A

3 Keyah asked some football players from teams A and B to name the total number of fouls they committed during football games last season. Instead of asking every player, she took a random sample of 5 players from each team to create the dot plots below. Each X represents one player.

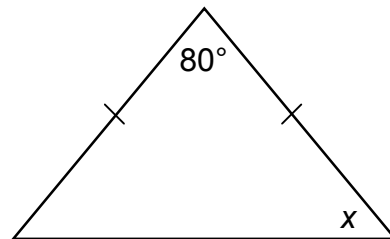


Based on these random samples, Keyah can reasonably infer that –

- A** team A scored more points last season than team B.
- B** team A committed about as many fouls as team B.
- C** team A committed less than half as many fouls as team B.
- D** team A won more football games last season than team B.

7.12A

4 An isosceles triangle is shown below.

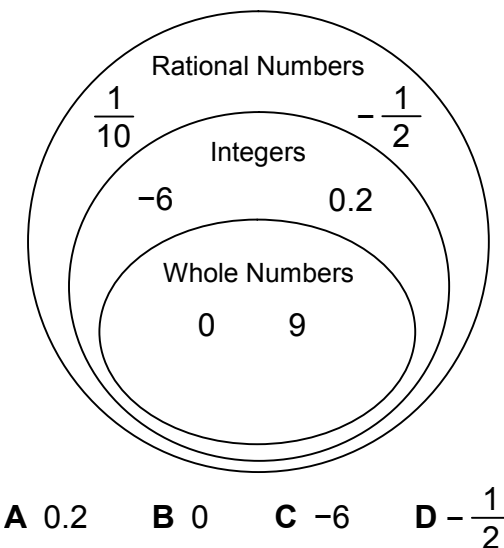


Which equation can be used to find the measure of angle x ?

- F** $360 - 80x = 180$
- G** $360 - 80 - x = 180$
- H** $x + 2(80) = 180$
- J** $2x + 80 = 180$

7.11C

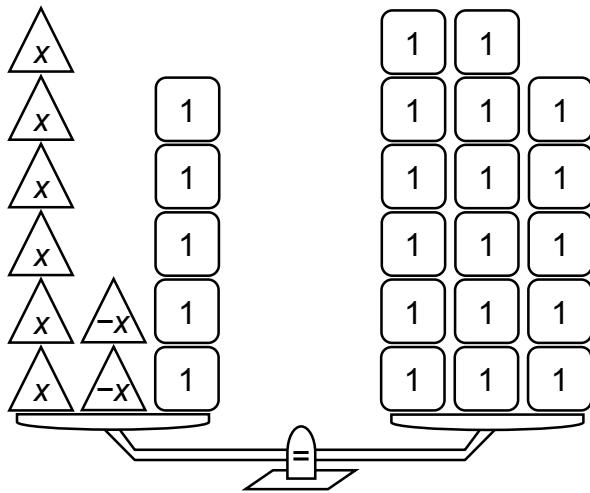
5 Which number in this Venn diagram is not in the correct place?



- A** 0.2 **B** 0 **C** -6 **D** $-\frac{1}{2}$

7.2A

1 Keisha created the model below to represent an equation.



What equation does Keisha's model represent and what is the value of x ?

- A $8x + 5 = 17$; $x = -1.5$
- B $6x - 2x + 5 = 17$; $x = -3$
- C $8x + 5 = 17$; $x = 1.5$
- D $6x - 2x + 5 = 17$; $x = 3$

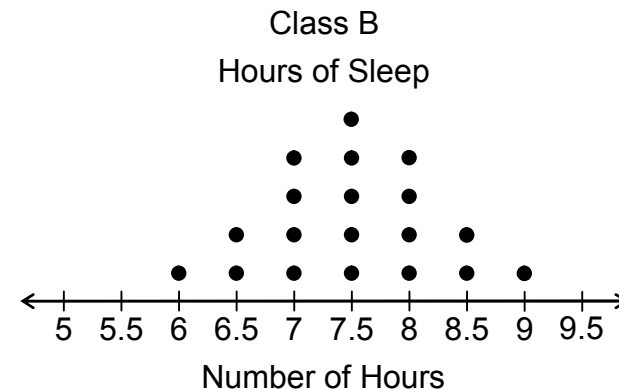
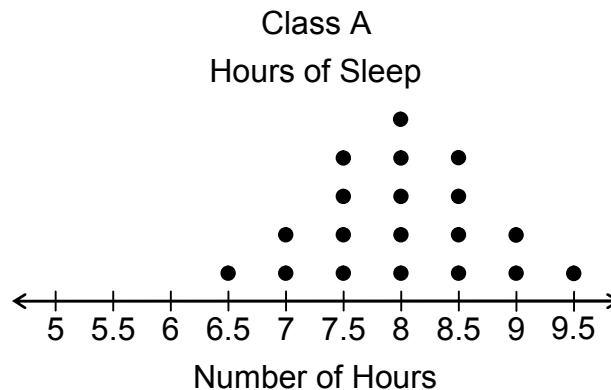
7.11A

2 The scale on a certain map of Texas indicates that $\frac{1}{4}$ inch represents 20 miles. If the actual distance between Waco and Cuero is 200 miles, a ruler placed on the map between the two points would indicate what number of inches?

- F $5\frac{1}{4}$
- G 4
- H $2\frac{1}{2}$
- J 3

7.5C

3 The dot plots below show the number of hours the students in two different classes slept last night. Each dot represents one student.



Three statements about the data shown on the plots are listed below.

- I: The distribution of the data in each plot is symmetrical.
- II: The mode of the data for class A is equal to the mode of the data for class B.
- III: The range of the data for class A is equal to the range of the data for class B.

Which of the statements are true?

- A Statements I and II
- B Statements I and III
- C Statements II and III
- D None are true

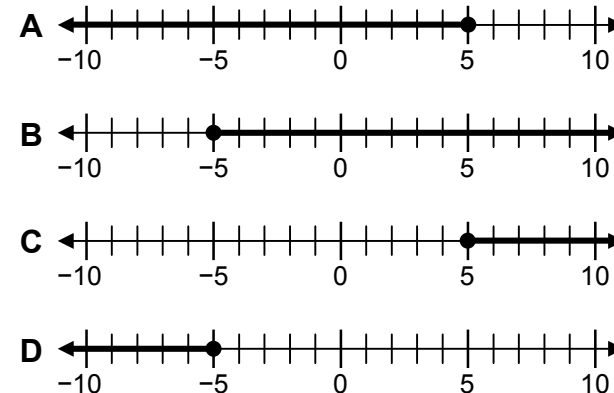
7.12C

4 A caterer received an order to prepare 120 servings of salad for a banquet. Each serving will weigh 4 ounces. So far the caterer has prepared 60 ounces of salad. What percentage of the order has the caterer completed?

- F 12.5%
- G $6\frac{2}{3}\%$
- H 50%
- J 8.75%

7.4D

5 Which number line represents the solution to the inequality $-2x + 6 \geq -4$?



7.10B

- 1 Which problem situation corresponds to the equation $40 + 10x = 220$?
- A For his birthday, Chaz received \$40 from his parents plus \$10 from each of his friends. How many friends, x , does Chaz have if he received a total of \$220 for his birthday?
 - B Chaz needs \$220 to buy a new bike and \$40 to buy a new helmet. Chaz has saved \$10 so far. How many more dollars, x , does he need to purchase the new bike and helmet?
 - C Chaz earned \$220 for painting his neighbor's fence and \$40 for painting his neighbor's gate. If it took Chaz 10 hours to complete the work, how many dollars, x , did he earn each hour he worked?
 - D Chaz's goal is to study for 220 minutes total this week. If he has already studied for 40 minutes, how many more minutes x , should he study to reach his goal?

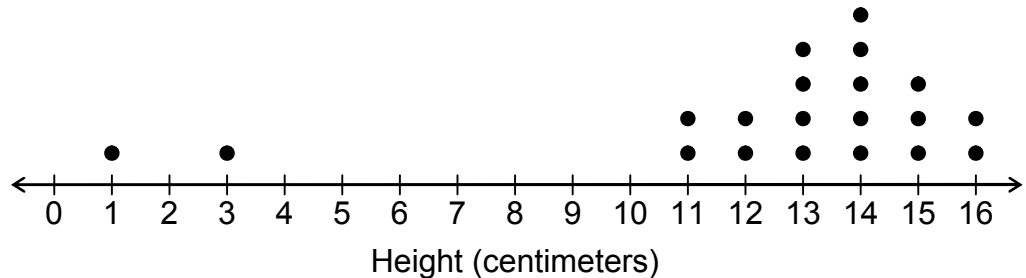
7.10C

- 2 Which statement about π is true?
- F It is the ratio of the circumference of a circle to its radius.
 - G It is the ratio of the diameter of a circle to its radius.
 - H It is the ratio of the circumference of a circle to its diameter.
 - J It is the ratio of the radius of a circle to its diameter.

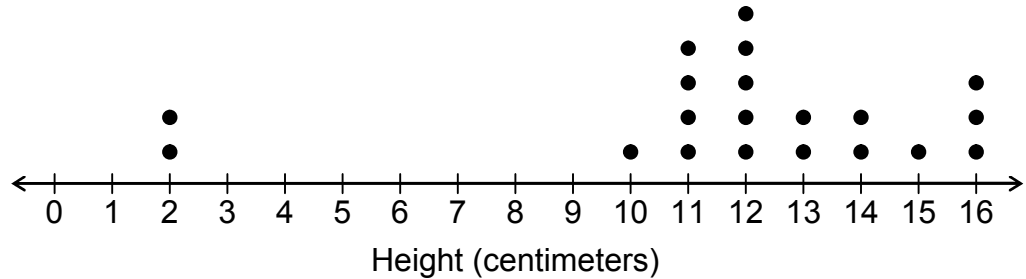
7.5B

3 Bryan and Molly each planted 20 bean seeds in their gardens on May 1. On the dot plots below, they recorded the heights of the plants that grew from the seeds two months later.

Bryan's Bean Plant Growth



Molly's Bean Plant Growth



Which statement is true?

- A The data on both plots can best be described as skewed upward.
- B The data on both plots can best be described as skewed right.
- C The data on both plots can best be described as skewed downward.
- D The data on both plots can best be described as skewed left.

7.12A

4 Mr. Zhāng received a shipment that arrived in a cardboard box in the shape of a rectangular prism. The volume of the box was 110 cubic feet. The area of the base of the box was 20 square feet. What was the height of the cardboard box?

- F 5.5 feet
- G 4.75 feet
- H 5.25 feet
- J Not here

7.9A

5 Ms. Wright had $\frac{3}{5}$ quart of berries. She used $\frac{1}{4}$ of the berries to make a fruit salad. She used the rest of the berries to make turnovers. What fraction of a quart of berries did she use to make turnovers?

- A $\frac{3}{4}$
- B $\frac{7}{20}$
- C $\frac{2}{3}$
- D $\frac{9}{20}$

7.3B