

**RISING GRADE 7 SUMMER REVIEW PACKET**  
***DUE ON THE FIRST DAY OF SCHOOL***

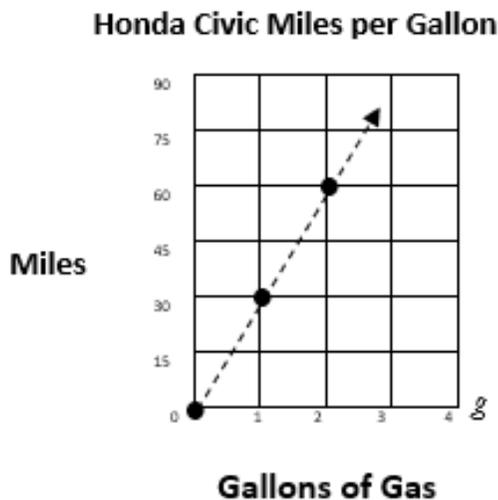
The problems in this packet are designed to help you review topics from previous mathematics courses that are essential to your success in your next math class. **You are expected to bring this completed packet to class on the first day of school.** In addition, this packet will count as part of your first quarter grade. **Upon returning, you will be ASSESSED on the content of this packet.** All contents outlined in the packet are Grade 6 objectives. Neatly **SHOW YOUR WORK** on a separate sheet of paper.

1

The AOMS band can play 3 songs in 12 minutes. Assuming that all of the songs are the same length, find the unit rate: minutes / song.  
(just answer with an integer)

2

Below is a graph of the number of miles (m) you can drive in a Honda civic if you have g gallons of gas.



What is the rate of miles per gallon you can drive in a Honda Civic?

3

Lin runs 5 laps around a track in 6 minutes.

(a) A) How many minutes per lap is that?

(b) B) How many laps per minute is that?

(c) C) If Lin runs 21 laps at the same rate, how long does it take her?

4

Mrs. L can grade 115 papers in 230 minutes.

How many minutes does it take her to grade 1 paper at this standard rate?

5

How many pounds are equivalent to 7 kg? Write the correct answer.

Note: 1 kg  $\approx$  2.2 pounds

6

The seats in a football stadium are arranged as 50 seats per row. Calculate the missing value to complete the given proportion based on the statement.

$$\frac{50}{1} = \frac{350}{\boxed{\phantom{000}}}$$

7

The Totally Clean Toothpaste Company advertises that  $\frac{9}{10}$  of all people surveyed prefer their toothpaste. What percent of the people surveyed prefer Totally Clean Toothpaste?

8

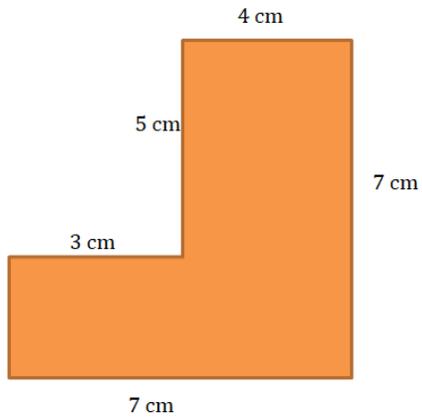
Determine each answer to the nearest tenth of a percent.

(a) 8 out of 32 football teams are on the East Coast. What percentage of football teams are on the East Coast?

(b) It rained 4 out of 7 days this week. What percentage of days did it rain?

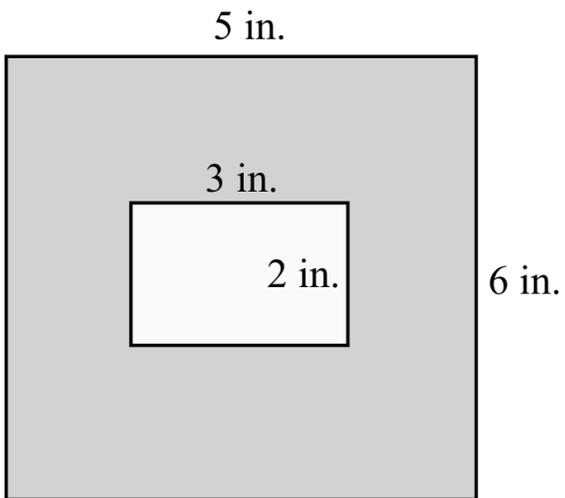
9

Calculate the area of the composite figure given below. Enter the value of the area obtained in  $\text{cm}^2$ .



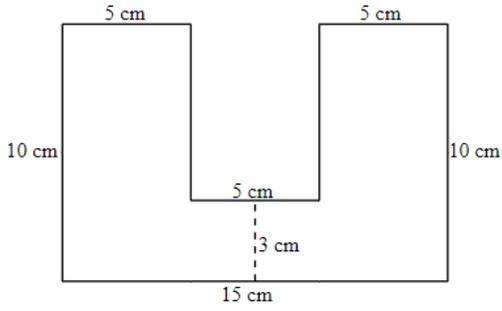
10

Calculate the area of the shaded region (in square inches) in the figure given below. Write the correct answer.



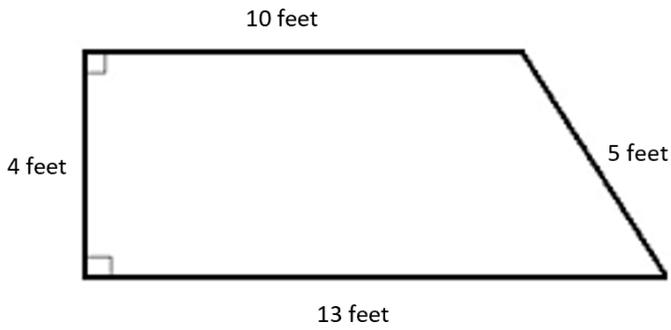
11

Calculate the area of the given figure in square centimeters. Write the correct answer.




12

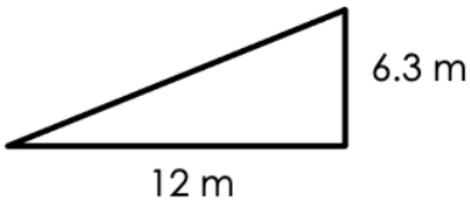
Four side lengths of a right trapezoid are provided below.



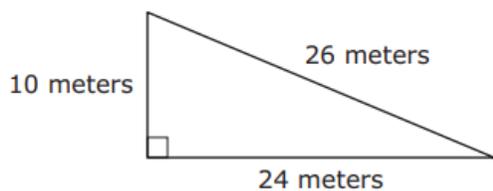
Find the area, in square feet, of the right trapezoid.

13

Find the area:



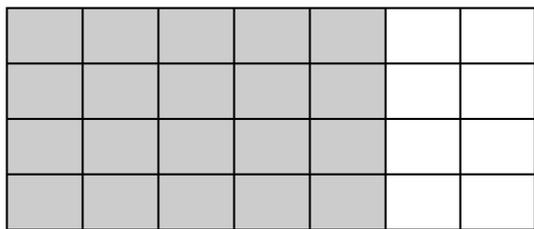
14 A right triangle and its dimensions are shown in this diagram.



What is the area, in square meters, of the triangle?

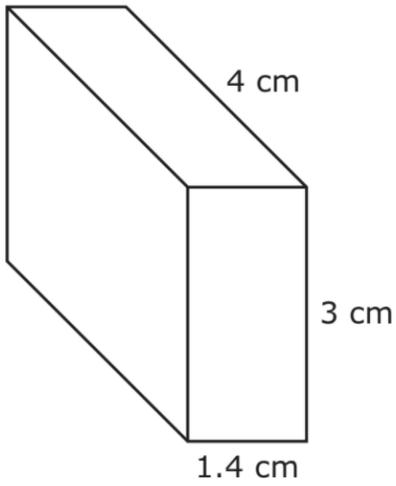
Enter your answer in the answer boxes at the top of the answer **grid** and completely fill the matching circles.

15 The area of George's rabbit pen is 189 square feet. The length of the pen 18 feet. What is the width?



16 Write a numeric expression to represent the shading in the given area model.

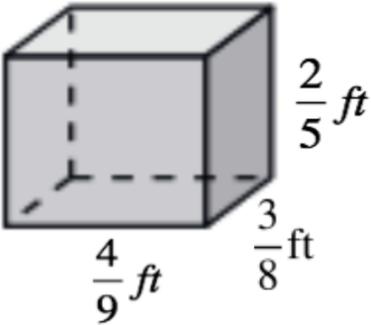
- 17 The dimensions of the rectangular prism shown are given in centimeters.



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

- 18 Find the volume of the prism. Type, upload an image of your work, or use the Scratchpad.

(a)



- (b) Enter your final answer (as a fraction in simplest form):

Don't forget units!

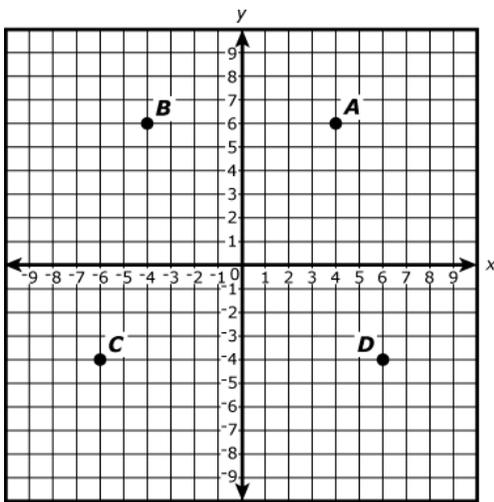
19 If Roger drives 125 miles in 2.5 hours what is his average speed in miles per hour?

20 Cornelius wants to put 30% of the money that he makes into a savings account.

If he earned \$270 last week, how much money should he put in the savings account?

21 Four points are shown on this coordinate plane.

(a)



Match each ordered pair to its corresponding point on the coordinate plane.

Drag and drop each ordered pair into the correct box.

Point *A*

Point *B*

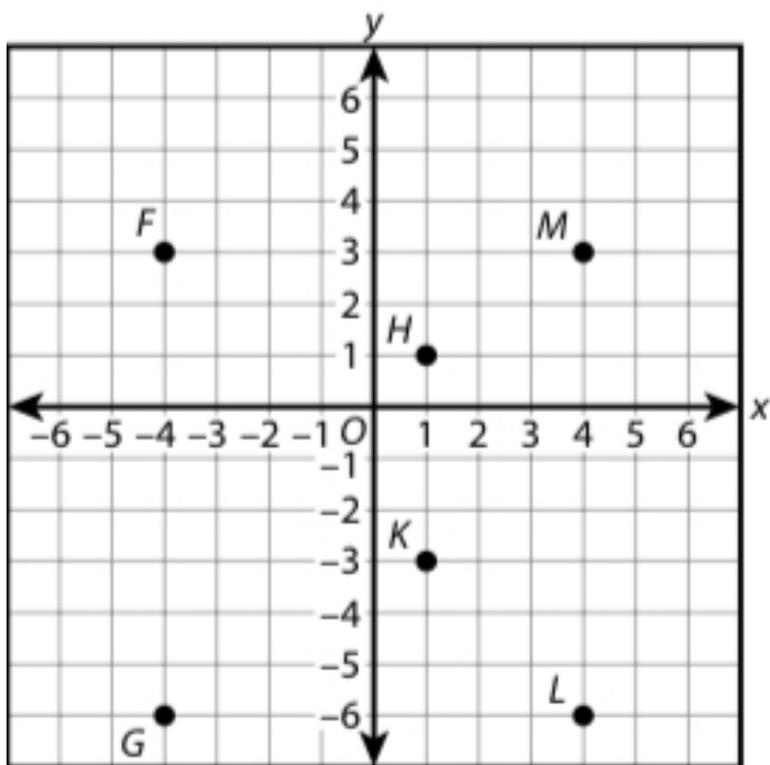
Point *C*

Point *D*

DRAG & DROP THE ANSWER

- (b) Point  $E$  is represented by the ordered pair  $(-8, 5)$ . A student will reflect the point over the  $x$ -axis. What is the ordered pair that will represent point  $E$  after it has been reflected over the  $x$ -axis?

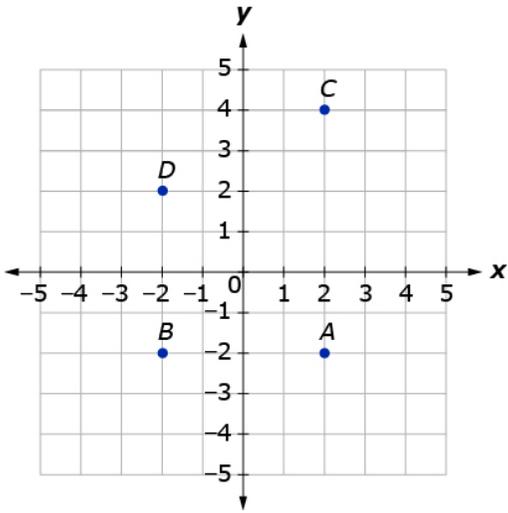
The coordinate plane below shows six graphed points.



22

What is the distance between points M and L?

- 23 Three vertices of a rectangle ABDE are shown below.



Determine the location of Point E and use that to find the perimeter of the rectangle.

Enter your answer in the box below.

- 24 Jeffery Yuchang Sue is designing a little office building that looks unique for Robloxian Services Incorporated, as they are in need of more office buildings. He needs to find out how many square meters of space the building will take up on the street, for obvious reasons.
- (a)

Graph composite figure ABCDEFG, then solve the area of the shape.

A (-3, -3)	B (-2, -1)	C (-1, -1)	D (-2, 1)	E (2, 1)	F (3, 3)	G (6, -3)
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- (b) Area of the triangle (with units)

- (c) Area of the parallelogram (with units)

(d) Area of the trapezoid (with units)

(e) Total area of the space (with units)

25 Last weekend Mira gave birth to twins.

One of the babies weighed 6.625 pounds. The other weighed 5.75 pounds.

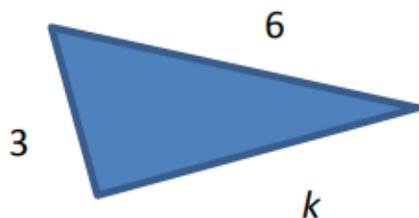
What is the difference, in pounds, of the weights of the two babies?

26 At the start of a year, Jacob is 1.8 meters tall.

Over the course of the year he grows 0.35 meters.

How tall is Jacob at the end of the year?

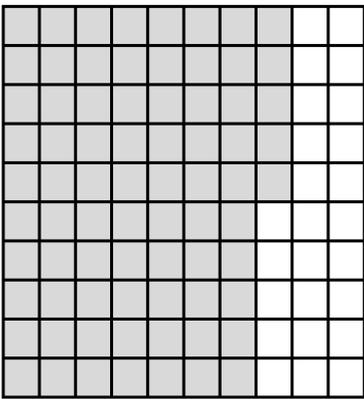
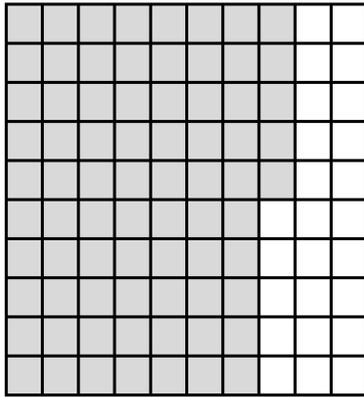
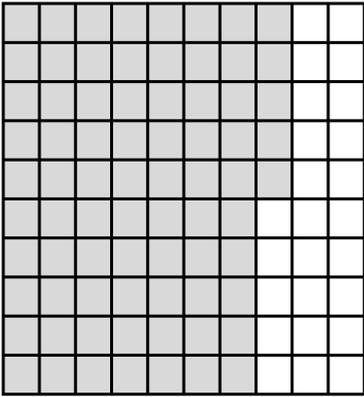
27 Write an expression for the perimeter of this triangle.



28 The area of a soccer field was 7,140 square meters. Suppose that there were six players on the field and that each covered an equal portion of the field. How many square meters did each player cover?

29

Aaron wants to find the product of  $0.75$  and  $3$ . To start, he correctly represents  $0.75$  three times using the grids shown below.



What is the product of  $0.75 \times 3$ ?

30

Lucas has the following data:  
21, 34, 28, 60, 20

Determine the range of the given data and write the correct answer.

31

An expression is given.

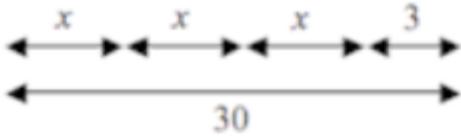
$$3(3^2 - 4)$$

What is the value of the expression?

32 Evaluate the following expression.

$$90 - 42 \div 7 + 6 \times 5$$

33 Create an equation including variables from the diagram below and evaluate to find the value of the variable:



$$\boxed{\phantom{000}} + \boxed{\phantom{000}} = \boxed{\phantom{000}} \text{ Now solve for } x = \boxed{\phantom{000}}$$

34 Evaluate the following expression:

$$137.66 + 72.93 = \boxed{\phantom{000.00}}$$

35 Write an expression to show how you would solve this problem. YOU ARE NOT SOLVING!

**Tanner brings donuts to school for his friends. He brings 6 chocolate frosted donuts, 8 glazed donuts, and 4 sprinkles donuts. How many donuts did Tanner bring in total?**

36 Evaluate the expression below.

$$3.6 \times 5.1$$

37 For each equation, find a value for  $x$  that makes the equation true.

(a)  $65 = -5x$

(b)  $10 = 3x - 6$

(c)  $3(10 - x) = 6$

(d)  $\frac{5}{4}x = \frac{9}{4}$

(e)  $\frac{1}{2}(x - 6) = 7$

(f)  $1.5x - 2.4 = 0.6$

**38** Find the value of  $y$  that makes the equation below true.

$$18 = y - 8$$

**39** What is the value of the expression below?

$$9^3$$

**40** Evaluate the expression  $4n + 2$  when  $n = 5$

41 Write the prime factorization of the following number, using exponents.

48

42 What is the value of this expression when  $g = 1.5$ ?

$$5g^2$$

Enter your answer in the box.

43 Determine the mode of the given data and write the correct answer.

2, 7, 9, 9, 4, 5, 9

44 Write the Greatest Common Factor of **12** and **18**.

45 Determine the mean of the following data and write the correct answer.

11, 0, 6, 1, 0, 0

46 Joseph has the following data:

8, 4, 7, 4, 7, 1, 0, 8, 0, 8

Determine the mode of the given data and write the correct answer.

47 Determine the mean of the following data and write the correct answer.

1.5, 2, 2.5, 5, 3, 1, 5, 8, 1, 1

48 Evaluate

$86 - h$

where  $h = 26$

49 Nate is selling candy bars for a school fundraiser. He has already sold 47 candy bars, and his goal is to sell a total of 80 candy bars.

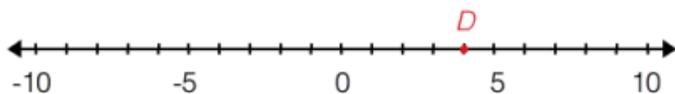
(a)

A) Write an equation to describe the situation, where  $n$  represents the number of candy bars Jonah still needs to sell to meet his goal.

(b) B) How many more candy bars does Nate need to sell?

 candy bars

50 Use the number line. Enter the integer value that point  $D$  represents.



51 There were 12 vacant seats in an auditorium. If the number of vacant seats is 5% of the total number of seats, then calculate the total number of seats.

52 15% of what number is 15? Write the answer in the simplified form.

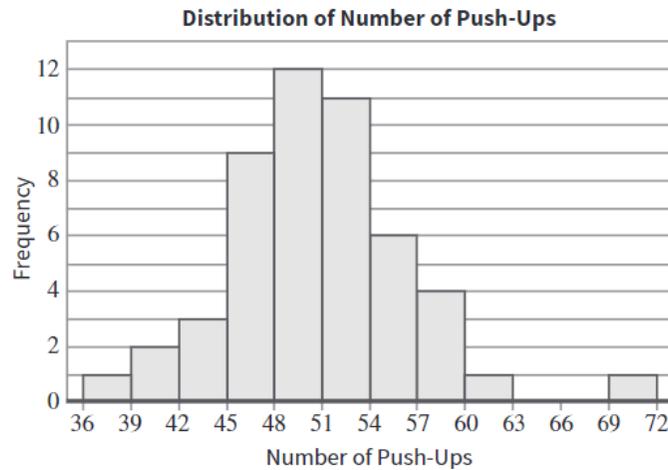
53 9 is 15% of what number?

54  $-6 - (-12)$

55  $-(-4) + 8$

56  $-12 + 5 - (-2)$

57 The following histogram summarizes the recorded number of push-ups that a group of fitness instructors completed in a certain time period. Each interval contains possible values at the left endpoint up to but not including the right endpoint.

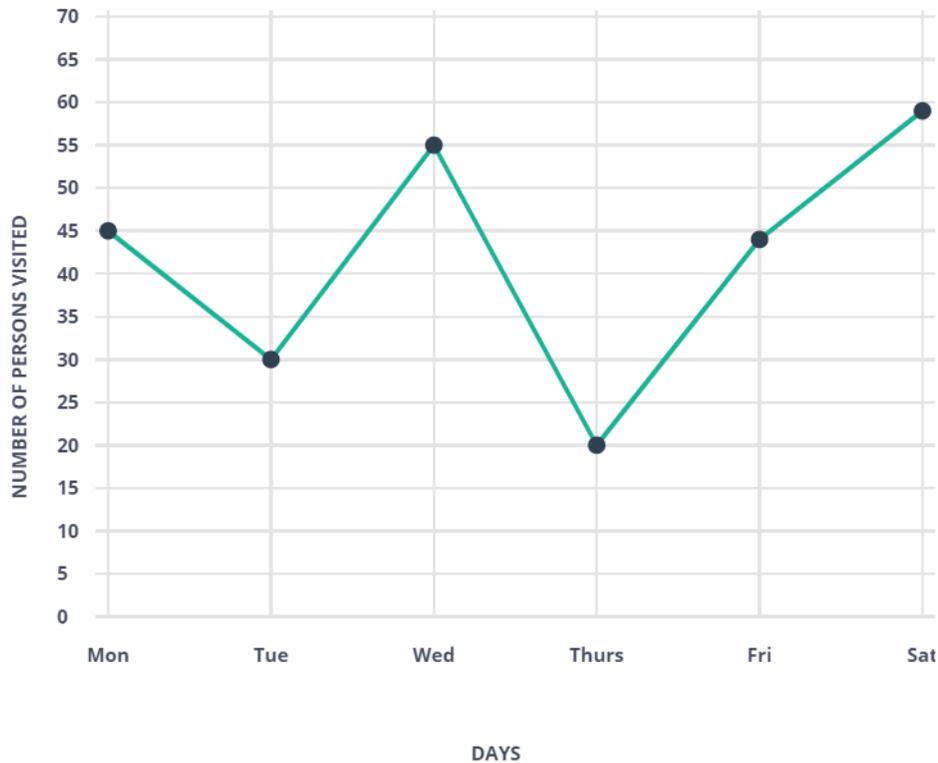


What is the total number of fitness instructors represented in the histogram who completed 57 or more push-ups?  
Enter your answer in the space provided.

58 Use  $>$ ,  $<$ , or  $=$  to make the inequality true.

$$|-5| \underline{\hspace{1cm}} 4$$

A shopkeeper recorded the number of persons that visited his shop. Consider the line graph given below.



Find the number of persons that visited the shop on Thursday (Thurs). Write the correct answer.

60

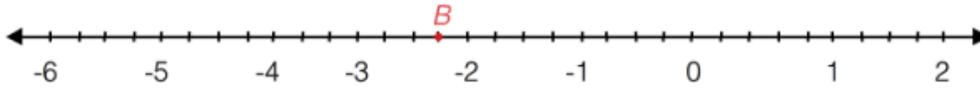
A basketball team played 28 games. The team won 20 games and lost the remaining games. What is the ratio of the number of games the team won to the number of games the team **lost**?

Enter your ratio in the space provided. Enter **only** your ratio.

61

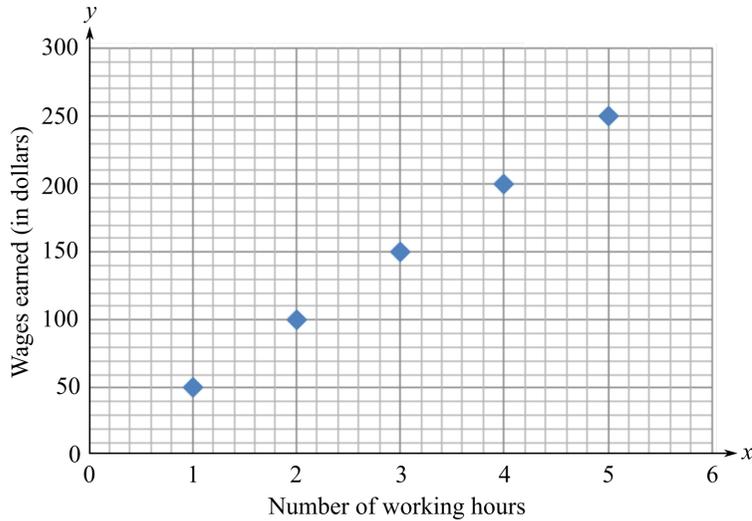
A book club has 36 members. There are 24 boys and 12 girls in the club. What is the ratio of the number of boys in the club to the number of girls in the club?

62

Enter the **decimal** value positioned at point *B*.


63

The graph given below represents the relation between the wages earned (in dollars) by an employee and the number of working hours. Let  $x$  be the number of working hours and  $y$  be the wages earned. Find an equation corresponding to the graph.




64

On a cold winter night the overnight low temperature in Chicago was  $-10^{\circ}\text{C}$ . The next day the high temperature was  $20^{\circ}\text{C}$ . What was the increase in temperature in degrees Celsius from the overnight low to the high temperature that day?



65

Let cheeseburger =  $c$

Let hamburger =  $h$

Let french fries =  $f$

Let coffee =  $e$

Let double double =  $d$

Let shake =  $s$

Write an algebraic expression that shows the following order:

**You:** one double double and one shake

**Friend #1:** one french fries, one shake

**Friend #2:** one double double and one french fries

**Friend #3:** one cheeseburger and one french fries

66

Evaluate

$$120 + a$$

where  $a = 130$

67

Solve for  $x$ .

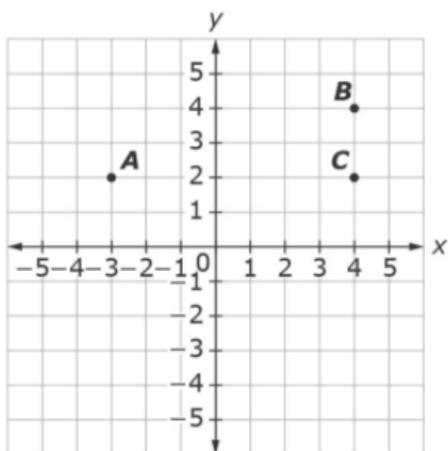
$$8 + x = 25$$

A three digit number has a hundreds digit  $S$ , tens digit  $T$ , and ones digit  $U$ .

$S$	$T$	$U$
↑ hundreds digit	↑ tens digit	↑ ones digit

Write an expression that gives the value of the number.

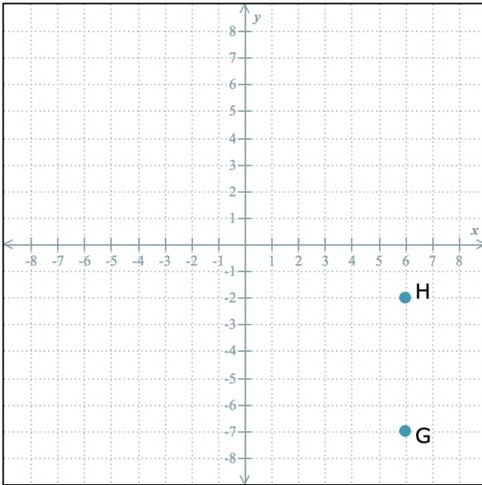
This grid shows the location of three points. Enter the distance between point A and point C.




Find the distance between the points (4,-3) and (-6,-3).

71

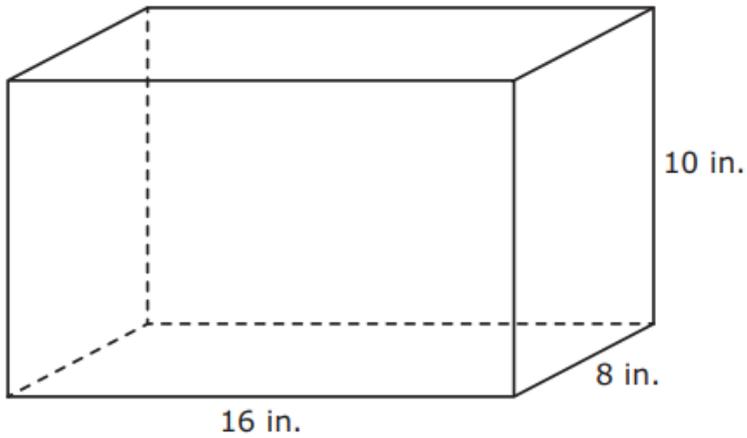
Find the distance between point G and point H.



\_\_\_\_\_ units.

72

The dimensions of a rectangular prism are shown in the diagram.



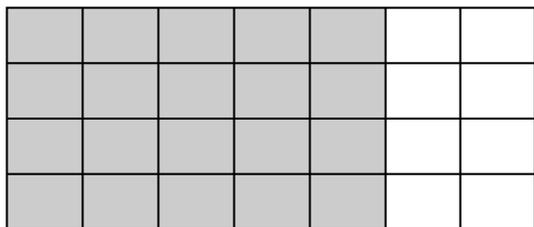
What is the total surface area in square inches of the prism?

73

Find the area:



15 cm

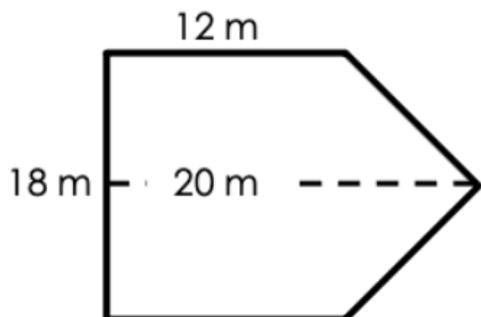


74

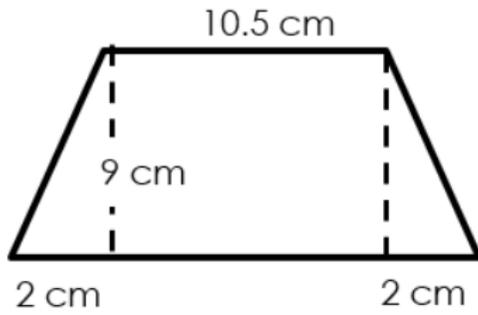
Write a numeric expression to represent the shading in the given area model.

75

Find the area:



76 Find the area:



77 Mya is covering her square poster with tissue paper, so she needs to make sure she has enough to cover the area of the poster. The poster is 1.5 meters long. What is the area of the poster?

78 Each morning a cafeteria worker pours cereal into bowls. She can fill 4 bowls using 3 cups of cereal. A cereal box contains 9 cups of cereal. What is the maximum number of bowls that 1 cereal box can fill?

79 Lydia evaluated the expression  $14 + 15 - y^2 \div 5$  when  $y = 10$ , as shown.

(a)

<b>Given</b>	$14 + 15 - y^2 \div 5$
<b>Step 1</b>	$14 + 15 - 10^2 \div 5$
<b>Step 2</b>	$14 + 15 - 20 \div 5$
<b>Step 3</b>	$14 + 15 - 4$
<b>Step 4</b>	$29 - 4$
<b>Step 5</b>	$25$

A) Lydia made an error in her calculation. In which step did Lydia make an error?

- (A) Step 2
- (B) Step 3
- (C) Step 4
- (D) Step 5

(b) B) What is the correct value of the evaluated expression?

80 Write the following statement in the form of an equation.  
The product of 9 and  $w$  is 108.

81 Hillary has fish tank with 20 fish inside. She has 3 different types of fish: goldfish, guppies, and neon tetras. The number of each fish she has is listed below.

(a)

- 12 goldfish
- 5 guppies
- 3 neon tetras

What is the ratio of goldfish to neon tetras in Hillary's tank?

- (A) 12 : 1
- (B) 6 : 1
- (C) 4 : 1
- (D) 3 : 1
- (E) 2 : 1

(b) What percent of the fish in Hillary's tank are guppies?

82 Ava has the following data:

8, 9, 9,  $d$ , 9, 11

If the mean of the data is 9, then what is the value of  $d$ ? Write the correct answer.

83 3 out of 7 members of a gym club are female. If there are 280 total members, how many are male? Use a ratio table.

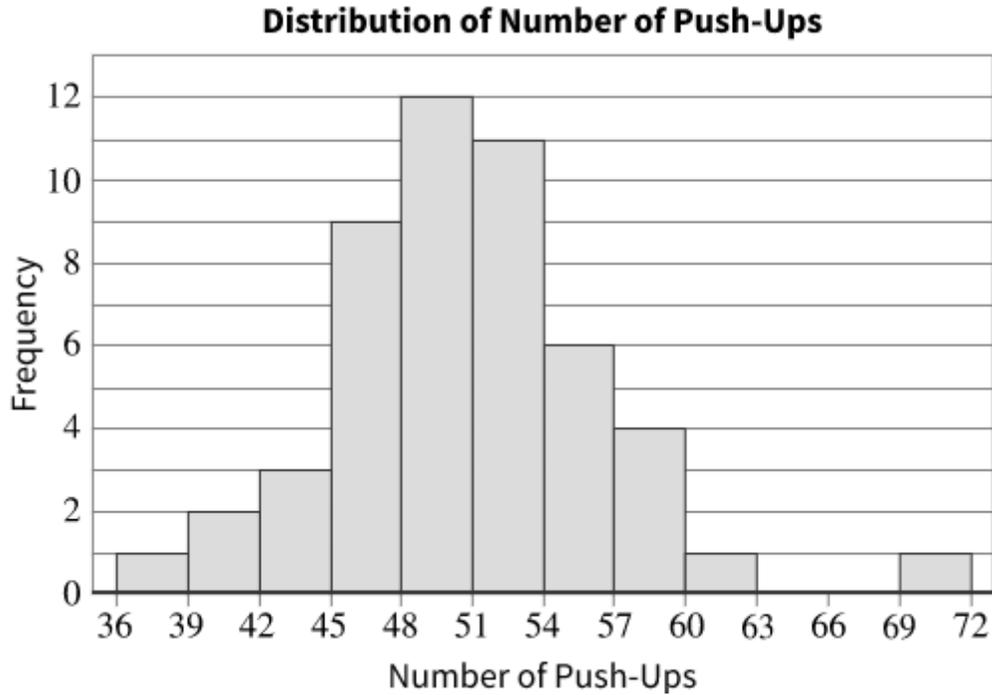
84

At a convenience store Darren purchased a bag of chips for \$1.89 and a candy bar for \$0.95 including tax.

If Darren paid with a \$20 bill, how much change did he receive?

85

The following histogram summarizes the recorded number of push-ups that a group of fitness instructors completed in a certain time period. Each interval contains possible values at the left endpoint up to but not including the right endpoint.



What is the total number of fitness instructors represented in the histogram who completed 57 or more push-ups?

86

What is the value of  $0.2^3$  ?

Enter your answer in the box.

87

Enter the unknown value that makes this statement true:

\_\_\_\_\_ is 75% of 200.