

Name: \_\_\_\_\_

## RISING 7<sup>th</sup> Grade Summer Work Packet

- Must show ALL necessary work for full credit! (Use a separate sheet if you prefer)
- Worth a QUIZ grade for the 1<sup>st</sup> quarter
- Due Thursday August 30!!

What is the greatest common factor of 36 and 126?

- (A) 6                      (B) 9                      (C) 12                      (D) 18

Find the value of  $7^2 - \sqrt{16} + 5^3$ .

- (A) 9                      (B) 21                      (C) 166                      (D) 170

Which of the following shows 160 as a product of its prime factors?

- (A)  $2 \cdot 8 \cdot 10$                       (B)  $2 \cdot 4 \cdot 4 \cdot 5$   
(C)  $2 \cdot 2 \cdot 2 \cdot 2 \cdot 5$                       (D)  $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 5$

What is the value of  $\frac{3}{4} \div \frac{6}{7}$ ?

- (A)  $\frac{9}{14}$                       (B)  $\frac{7}{8}$                       (C)  $1\frac{1}{7}$                       (D)  $1\frac{17}{28}$

Which of the following ratios is equivalent to 60 : 72?

- (A) 5 : 8                      (B) 10 : 12                      (C) 15 : 12                      (D) 75 : 108

Which symbol makes the statement true?

$$|15| \boxed{?} -12$$

- (A)  $<$       (B)  $>$       (C)  $=$       (D)  $\geq$

Ben can type 150 words in 3 minutes. How many words can he type in 2 minutes?

- (A) 50      (B) 100      (C) 200      (D) 300

Which of the following is **not** equivalent to 36%?

- (A) 18 out of 50      (B)  $\frac{8}{25}$   
(C)  $\frac{1}{2}$  of 72%      (D) 0.36

60% of a number is 567. What is 50% of the number?

- (A) 170.1      (B) 340.2      (C) 472.5      (D) 945

A business center has 36 desktop computers and 54 laptop computers. What percent of the computers are laptop computers?

- (A) 40%      (B) 60%      (C) 66.7%      (D) 150%

What is the value of the expression  $\frac{10p - 5}{5} + 3(p - 1)$  when  $p = 2$ ?

(A) 3

(B) 4

(C) 6

(D) 8

Find the greatest common factor of 36, 42, and 78.

Find the value of  $8^3 \div 8^2 \times 4^2$ .

Arrange the numbers in order from greatest to least.

105, -560, -73, 96, -20

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Determine the unknown number that makes this statement true.

$$0.25 \times \boxed{?} = 2.16$$

- There are numerous orchards in a certain area of town. Each orchard has the same number of apple trees and pear trees. Use the table to answer the following questions.

Number of Orchards	Number of Apple Trees	Number of Pear Trees
1	8	
2		30
5	40	

- a) Find the number of pear trees in 1 orchard.
- b) Find the number of apple trees in 2 orchards.
- c) Find the number of pear trees in 5 orchards.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The table shows the postage rates.

First 10 ounces	\$0.25
Per additional 10 ounces or part thereof	\$0.30

How much is the postage for a 75-ounce package?

The table below shows the prices of oranges at 4 stores.

Store	Price
A	3 for \$5
B	2 for \$3
C	5 for \$9
D	\$1.25 each

In which store can you buy 30 oranges with the least amount of money?

Isabella has \$6,000. She gave her mother \$1,800. She donated  $\frac{1}{4}$  of the remaining amount to a charity. What percent of her money did Isabella donate?

What is the value of  $\frac{1}{2} \div \frac{1}{4}$ ?

- (A)  $\frac{1}{8}$       (B)  $\frac{3}{4}$       (C) 2      (D) 8

What is the value of the expression  $3(x + 2) - \frac{4x}{5}$  when  $x = 10$ ?

- (A) 8      (B) 12      (C) 24      (D) 28

Simplify  $2(5 + w) + 3(w + 2)$ .

- (A)  $2w + 12$       (B)  $2w + 16$       (C)  $5w + 16$       (D)  $16w$

What is the solution of the equation  $\frac{4}{7}p = 56$ ?

- (A) 8      (B) 14      (C) 32      (D) 98

Write 150 as a product of its prime factors.

A box has a shipping limit of 30 pounds. If a factory wants to ship toys that weigh 0.75 pound each, how many toys can fit in a box?

What is the value of  $p$  in the equation below?

$$7 + p = 84$$

(A) 12

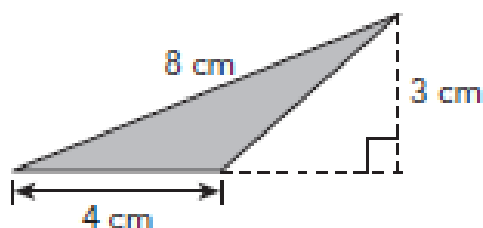
(B) 77

(C) 81

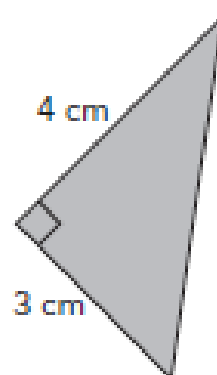
(D) 91

Which of the following triangles has an area of 12 square centimeters?

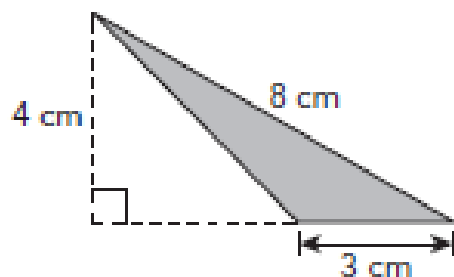
(A)



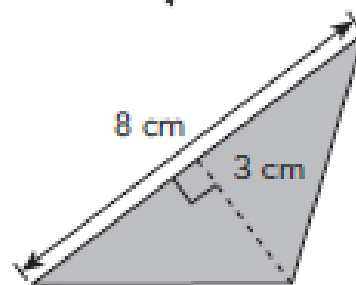
(B)



(C)



(D)



Factor the expression  $12p + 30$ .

**Simplify each expression.**

5.  $3 + 3s - 2s$

6.  $7y + 10 + 3y - 7 - 6y$

Which of the following has a negative value?

- (A) Receiving a pay raise of \$100
- (B) Walking down three flights of stairs
- (C) Taking an elevator from the ground floor to the 10th floor
- (D) Putting \$100 into a bank account

**Show your work:**

What is the value of  $9.3 \times 0.65$ ?

- (A) 6.045       (B) 8.65       (C) 9.95       (D) 14.308

**Show your work:**

What is the value of  $7.8 \div 0.3$ ?

- (A) 2.34       (B) 2.6       (C) 7.83       (D) 26

evaluate  $32^3$ .

Draw a horizontal number line to represent odd numbers greater than  $-41$  but less than  $-27$ .

Write an inequality for the statement:

The average temperature in January was  $11^\circ\text{C}$ , which is warmer than December's average temperature of  $-1^\circ\text{C}$ .

What is the value of  $8^2 - 2^2 + 3^3$ ?

- (A)  $-20$        (B)  $12$        (C)  $51$        (D)  $87$

Which of the inequalities is true?

- (A)  $-125 > |81|$   
 (B)  $-81 < -125$   
 (C)  $|-125| < 81$   
 (D)  $|-81| > -125$



Match the vocabulary word with the definition. Write the letter of the definition next to each word.

<b>Factor</b>	<b>a. the bottom number in a fraction</b>
<b>Sum</b>	<b>b. the answer to a division problem</b>
<b>Prime Number</b>	<b>c. a number made up of a whole number and a fraction</b>
<b>Numerator</b>	<b>d. the product of a given whole number and any other whole number</b>
<b>Square (of a number)</b>	<b>e. An angle with a measure greater than <math>90^\circ</math></b>
<b>Quotient</b>	<b>f. the number that is left over when a divisor does not divide the dividend equally</b>
<b>Estimate</b>	<b>g. the answer to an addition problem</b>
<b>Reciprocal</b>	<b>h. a number that has more than 2 factors</b>
<b>Obtuse angle</b>	<b>i. a fraction that has a numerator greater than its denominator</b>
<b>Multiple</b>	<b>j. to find the approximate value to a numerical expression</b>
<b>Denominator</b>	<b>k. the answer to subtraction problem</b>
<b>Composite</b>	<b>l. An angle with a measure less than <math>90^\circ</math></b>
<b>Remainder</b>	<b>m. a whole number that has only 2 factors, 1 and itself</b>
<b>Product</b>	<b>n. a number that is the product of two equal factors</b>
<b>Improper Fraction</b>	<b>o. the flip of a fraction (when you switch the numerator and denominator)</b>
<b>Acute angle</b>	<b>p. numbers you can multiply together to get another number</b>
<b>Difference</b>	<b>q. the answer to a multiplication problem</b>
<b>Mixed Number</b>	<b>r. the top number in a fraction</b>

Match the vocabulary word with the definition. Write the letter of the definition next to each word.

<b>Absolute Value</b>	<b>a. to write an expression without parentheses, using distributing</b>
<b>Circumference</b>	<b>b. a number less than zero</b>
<b>Coefficient</b>	<b>c. a quantity represented by a letter that can take different values</b>
<b>Expand</b>	<b>d. an ordered pair of numbers that gives the location of a point</b>
<b>Inequality</b>	<b>e. a ratio that compares a number to 100</b>
<b>Negative Number</b>	<b>f. a mathematical equation or rule</b>
<b>Percent</b>	<b>g. lines that intersect and form a right angle</b>
<b>Rate</b>	<b>h. the distance of a number from zero on a number line</b>
<b>Simplify</b>	<b>i. to write an equivalent expression by combining like terms</b>
<b>Variable</b>	<b>j. a line segment that connects two points on a circle and passes through the center of the circle</b>
<b>Substitute</b>	<b>k. a number sentence which states two values are unequal, using <math>&lt;</math> or <math>&gt;</math></b>
<b>Coordinates</b>	<b>l. a line segment that goes from the center of a circle to a point on the circle</b>
<b>Congruent</b>	<b>m. the distance around a circle</b>
<b>Formula</b>	<b>n. lines that do not intersect</b>
<b>Parallel</b>	<b>o. same size and same shape</b>
<b>Radius</b>	<b>p. to replace the variable by a number</b>
<b>Diameter</b>	<b>q. the number in front of your variable in an algebraic expression</b>
<b>Perpendicular</b>	<b>r. a ratio that compares two quantities with different units</b>

Solve each equation below:

1.  $x + 8 = 14$

$x =$  \_\_\_\_\_

2.  $y + 6 = 20$

$y =$  \_\_\_\_\_

3.  $p - 9 = 7$

$p =$  \_\_\_\_\_

4.  $k - 15 = 20$

$k =$  \_\_\_\_\_

5.  $6w = 72$

$w =$  \_\_\_\_\_

6.  $15q = 60$

$q =$  \_\_\_\_\_

7.  $\frac{1}{8}e = 7$

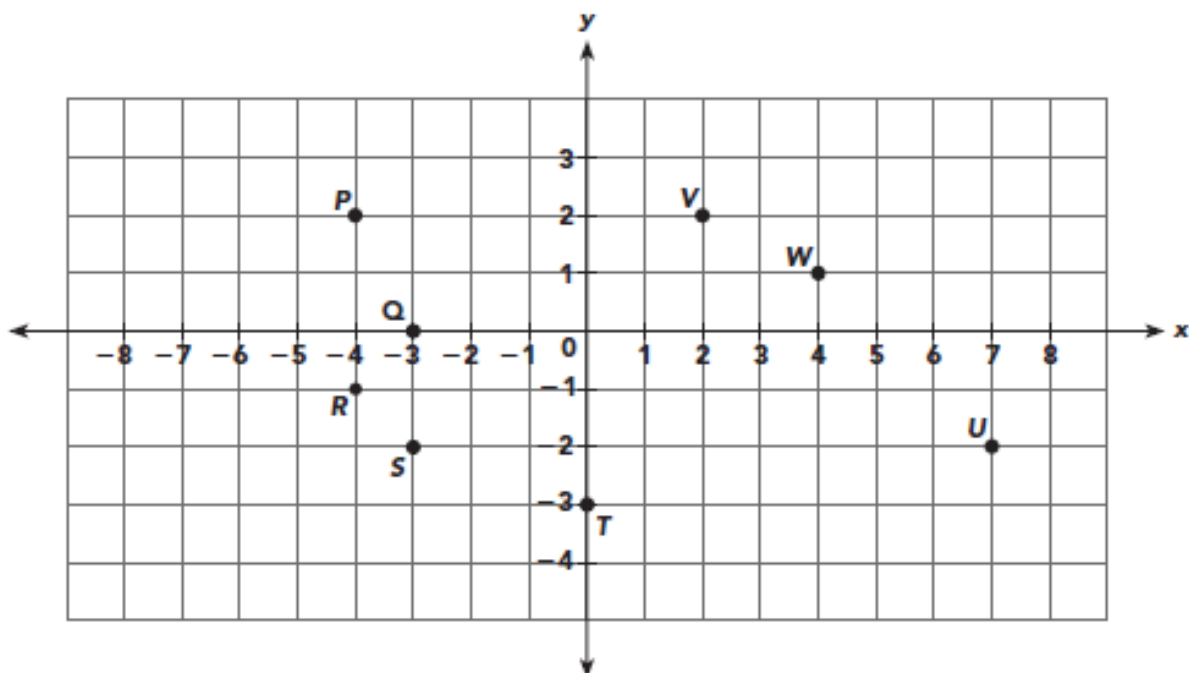
$e =$  \_\_\_\_\_

8.  $\frac{1}{10}g = 12$

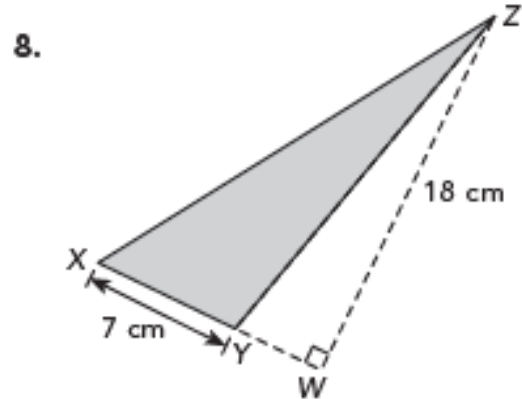
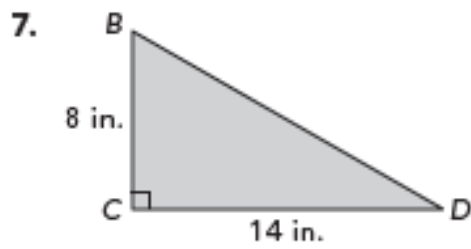
$g =$  \_\_\_\_\_

Identify the coordinates of each point and the quadrant for each point!

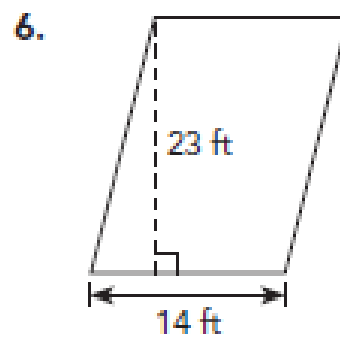
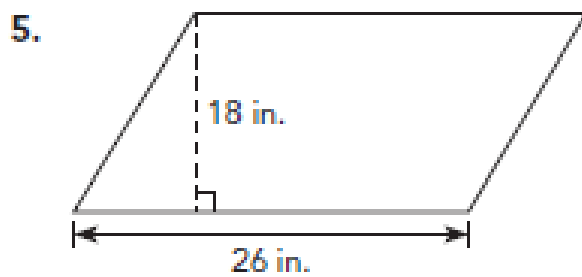
1. Give the coordinates of each point.



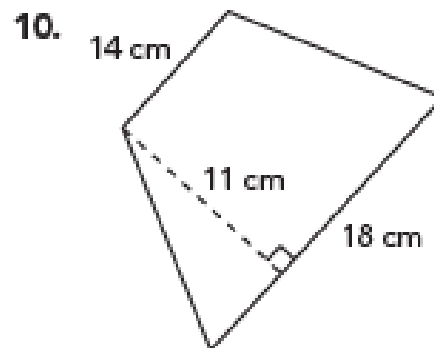
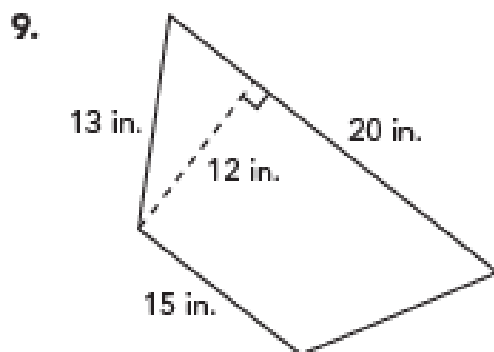
**Find the area of each triangle.**



**Find the area of each parallelogram.**

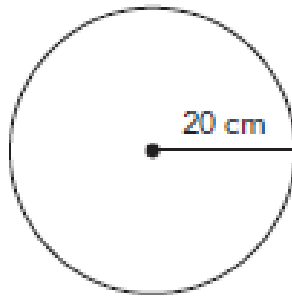


**Find the area of each trapezoid.**

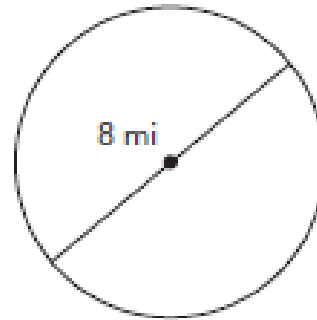


**Find the area of each circle. Use 3.14 as an approximation for  $\pi$ .**

1.

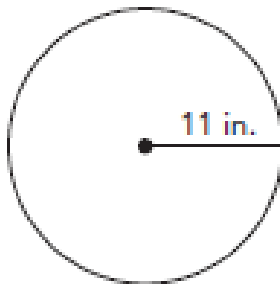


2.

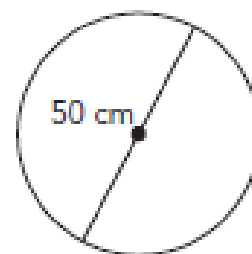


**Find the circumference of each circle. Use 3.14 as an approximation for  $\pi$ .**

1.



2.



**Multiple and show work!**

21.  $0.78 \times 3.6 =$  \_\_\_\_\_

22.  $2.8 \times 8.4 =$  \_\_\_\_\_

**Divide and show work!**

23.  $0.75 \div 0.5 =$  \_\_\_\_\_

24.  $0.63 \div 0.7 =$  \_\_\_\_\_

**SET UP & SOLVE!**

2. 35% of 125 miles \_\_\_\_\_

3. 46% of 340 gallons \_\_\_\_\_

6. 120% of \$590 \_\_\_\_\_

7. 245% of 860 kilograms \_\_\_\_\_

10. 55% of \_\_\_\_\_ is 143.

11. 47% of \_\_\_\_\_ is 141.

12. 125% of \_\_\_\_\_ is 85.

13. 350% of \_\_\_\_\_ is 679.

**Expand each expression.**

1.  $3(4w + 5)$

= \_\_\_\_\_

2.  $5(6 - 3y)$

= \_\_\_\_\_

3.  $7(2a - 7)$

= \_\_\_\_\_

4.  $9(3p + 5)$

= \_\_\_\_\_

**Factor each expression.**

7.  $7y + 21$

= \_\_\_\_\_

8.  $12 - 4k$

= \_\_\_\_\_

9.  $18 - 12h$

= \_\_\_\_\_

10.  $20w + 15$

= \_\_\_\_\_

**Expand each expression. Then simplify the expression.**

17.  $3(3x + 7) + 4(5x - 2)$

= \_\_\_\_\_

18.  $9(5k + 2) + 4(7 - 10k)$

= \_\_\_\_\_

**Simplify each expression. Then factor the expression.**

21.  $12p - 8 + 6p + 14$

= \_\_\_\_\_

22.  $20 + 15x - 6 - 9x$

= \_\_\_\_\_

**SET UP & SOLVE**

A photocopy machine can print 735 copies in 7 minutes. What is the rate at which the machine prints the copies per minute?

A car traveled a distance of 192 miles from New York to a small town in Pennsylvania in 3 hours. Find the speed of the car.

It took Mike 3 hours to paint a 285 square feet surface. How many square feet can Mike paint in 1 hour?

Ms. O'Leary pays \$969.50 to stay one week in a hotel. What is the room rate per day?