

The problems in this packet are designed to help you review topics from Pre-Algebra and other courses that are important to your success in Algebra 1. Please try to do each problem and show the work that supports that answer. You are encouraged to complete or attempt to complete all of these questions before beginning Algebra I the last week of August.

Enjoy your summer! We look forward to seeing you in September!

Use order of operations to determine each answer:

1) $4 \cdot 16 + 8 - 0 \div 5$

2) $8(3 + 4) - 2 * 8 \div (5 - 3)$

3) $(8^2 + (13 - 4)^2) \div 5$

Insert parentheses to make the following equation true:

4) $8 + 12 \div 4 \cdot 5 = 1$

Determine the answer for each problem:

5) $94 - 87 = \underline{\hspace{2cm}}$ 6) $-51 - 98 = \underline{\hspace{2cm}}$ 7) $29 - 100 = \underline{\hspace{2cm}}$

8) $-777 - (-801) = \underline{\hspace{2cm}}$ 9) $-10 \cdot (-2 \cdot 18) = \underline{\hspace{2cm}}$ 10) $-(4 + -x) = \underline{\hspace{2cm}}$

11) $-844 \div 4 = \underline{\hspace{2cm}}$ 12) $\frac{-183}{-61} = \underline{\hspace{2cm}}$ 13) $891 \div -9 = \underline{\hspace{2cm}}$

Simplify each expression completely.

14) $-2(x + 3) =$ _____

15) $3(2x - 3) + (x - 5) =$ _____

16) $\frac{2}{3} (3x + 9) =$ _____

17) $5\frac{2}{5} + 4\frac{1}{5} =$ _____

18) $\frac{2}{3} + \frac{5}{8} + \frac{5}{6} =$ _____

19) $9 - 2\frac{1}{3} =$ _____

20) $10\frac{1}{4} - 3\frac{2}{3} =$ _____

21) $\frac{1}{2} * \frac{5}{8} * \frac{4}{5} =$ _____

22) $-\frac{16}{9} \div 8 =$ _____

23) $-\frac{3}{8} \div \frac{3}{4} =$ _____

Write as a decimal:

24) $\frac{7}{10} =$ _____

25) $\frac{1}{3} =$ _____

26) $8\frac{1}{4} =$ _____

Write as a percent:

27) $\frac{4}{5} =$ _____

28) $1\frac{2}{5} =$ _____

29) $\frac{2}{3} =$ _____

Write as a decimal:

30) 51% = _____

31) 102% = _____

32) $\frac{3}{4}\% =$ _____

Write as a simple fraction in lowest terms:

33) 125% = _____

34) 3% = _____

35) 50% = _____

Write as a percent AND as a simple fraction or mixed number:

$$36) .25 = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

$$37) 1.2 = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

$$38) .125 = \underline{\hspace{2cm}}$$
$$= \underline{\hspace{2cm}}$$

Solve each equation below and check your answers:

$$39) \quad x + 22 = 104.8$$

$$40) \quad 184 - x = 51$$

$$41) \quad x - 6 = 30 + 12$$

$$42) \quad 30x = 480$$

$$43) \quad 4y - 8 = 20$$

$$44) \quad 17 = \frac{x}{3}$$

$$45) \quad \frac{x}{24} = \frac{5}{12}$$

For each of the following, write an algebraic equation. Then solve each equation.

46) Eight times a number, increased by 6, is 62. What is the number?

47) Number C divided by 0.4 is 10. What is C ?

48) One half of a number is equal to 14. What is the number?

49) What number is 15% of 60?

50) 66 is 11% of what number?

51) 308 is what percent of 350?

52) A coat usually selling for \$150 is on sale at 25% off.
What is the sale price of the coat?

53) Jim purchased three CD's for \$15.00 each. What will the total cost for the CD's be including a 7% sales tax?

Evaluate each expression given that:

a) $x = 4$ and b) $x = -3$
 $x = 4$

$x = -3$

54) $2x =$ _____

55) $x^2 =$ _____

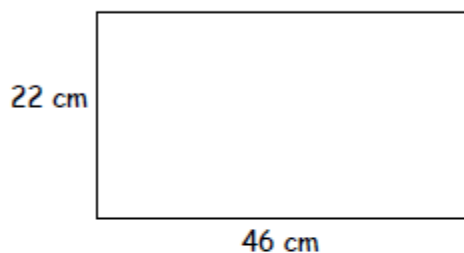
56) $x + 6 =$ _____

57) $5x - 3 =$ _____

Basic Geometry and Using Formulas.

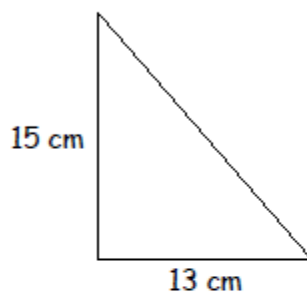
58) Find the perimeter.

$$P = 2l + 2w$$



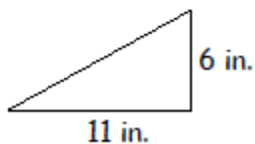
59) Find the perimeter to the nearest whole number.

$$P = s + s + s \quad a^2 + b^2 = c^2$$



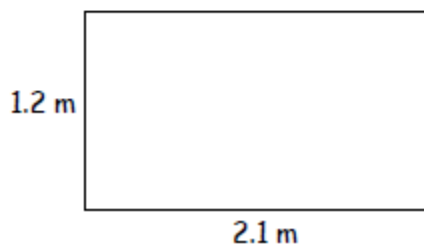
60) Find the area. $A = \frac{1}{2}bh$

$$A = \frac{1}{2}bh$$



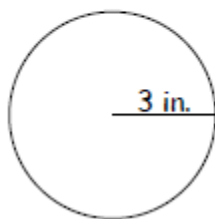
61) Find the area. $A = bh$

$$A = bh$$



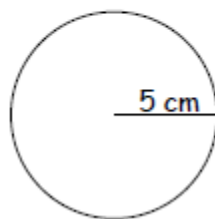
62) Find the circumference to the nearest tenth.

$$C = \pi d \quad \text{Pi} = 3.14$$



63) Find the area to the nearest tenth.

$$A = \pi r^2 \quad \text{Pi} = 3.14$$



Simplify:

64) $4(x + 3) =$ _____

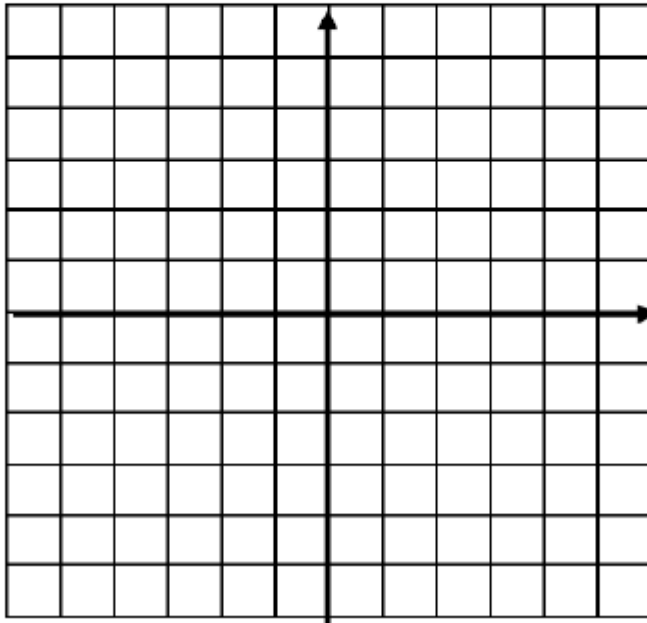
65) $-2(3x - 5) =$ _____

66) $2(3b + 1) - 5$

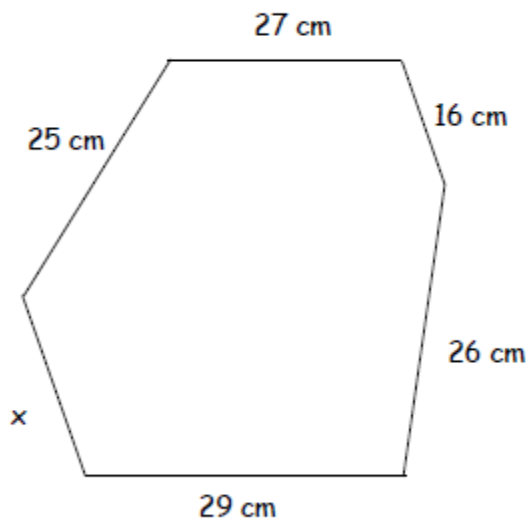
67) $2(x + 3) - 5(2x + 1)$

Plot each of the following points on the grid below. Use the letter to label the point on the graph.

68) A(3,0) B(5,5) C(-1,2) D(-3,-2) E(0,-3)



69) The perimeter of the figure below is equal to 150 cm. What is the length of the missing side?



70) Find each decimal equivalent.

$\frac{1}{8} =$	$\frac{1}{6} =$	$\frac{1}{10} =$
$\frac{1}{4} = \frac{2}{8} =$	$\frac{1}{3} = \frac{2}{6} =$	$\frac{1}{5} = \frac{2}{10} =$
$\frac{3}{8} =$	$\frac{3}{6} =$	$\frac{3}{10} =$
$\frac{2}{4} = \frac{4}{8} =$	$\frac{2}{3} = \frac{4}{6} =$	$\frac{2}{5} = \frac{4}{10} =$
$\frac{5}{8} =$	$\frac{5}{6} =$	$\frac{5}{10} =$
$\frac{3}{4} = \frac{6}{8} =$		$\frac{3}{5} = \frac{6}{10} =$
$\frac{7}{8} =$		$\frac{7}{10} =$
		$\frac{4}{5} = \frac{8}{10} =$
		$\frac{9}{10} =$