

## For Incoming Algebra Students

**Evaluate each expression.**

1)  $(-6) + (-1)$

2)  $1 + (-2)$

3)  $(-8) - 1$

4)  $1 - (-8)$

5)  $(-7) - 6 + (-4)$

6)  $(-3) - (-6) - 2$

7)  $4 - 4 - 7$

8)  $(-3) - 6 - (-5)$

9)  $|4|$

10)  $|-7|$

11)  $\sqrt{81}$

12)  $\sqrt{64}$

**Find each product.**

13)  $(-3)(-9)$

14)  $(8)(-7)$

15)  $(-10)(-1)(-10)$

16)  $(3)(8)(-3)$

$$17) -5 * 0$$

$$18) -5 * -1$$

**Find each quotient.**

$$19) \frac{-8}{-1}$$

$$20) -6 \div -2$$

$$21) 12 \div -6$$

$$22) \frac{-30}{3}$$

$$23) \frac{3}{0}$$

$$24) \frac{0}{9}$$

**Evaluate each expression.**

$$25) -4 + -5 - (-6 - -5)$$

$$26) -6 - |2 - 6|$$

$$27) \frac{3 - -5}{-4 \cdot -1}$$

$$28) (-3)^2 |6|$$

**Find each sum.**

$$29) \frac{7}{8} + \frac{3}{2}$$

$$30) \frac{1}{4} + 2\frac{1}{2}$$

**Find each difference.**

31)  $\frac{5}{7} - \frac{1}{2}$

32)  $4\frac{3}{8} - \frac{1}{2}$

**Find each product.**

33)  $1\frac{2}{5} \cdot \frac{1}{4}$

34)  $2 \cdot \frac{5}{6}$

**Find each quotient.**

35)  $\frac{1}{3} \div \frac{5}{8}$

36)  $\frac{1}{2} \div 2$

**Simplify each expression.**

37)  $-9b + 9b$

38)  $5k - 2 + 4k - 7$

39)  $-5(n - 10)$

40)  $-10(1 + 10r)$

41)  $-p + 7(5 + 5p)$

42)  $-7(10x - 6) - 2(8 + 5x)$

**Solve each equation.**

43)  $b - 20 = -20$

44)  $p - 12 = -20$

$$45) -27 = x - 16$$

$$46) 20x = 300$$

$$47) \frac{a}{18} = 12$$

$$48) \frac{k}{11} = -14$$

$$49) \frac{x}{7} - 6 = -8$$

$$50) -2m - 6 = 34$$

$$51) \frac{x - 10}{3} = -7$$

$$52) 4(x + 8) = 88$$

$$53) 127 = -x + 4(5x + 8)$$

$$54) 105 = -5(-2v - 5)$$

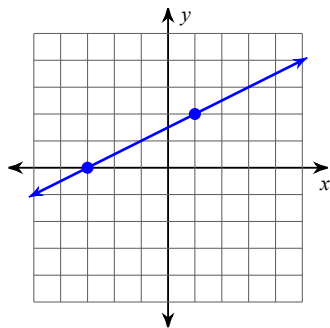
$$55) 224 = 6(3k + 4) + 7k$$

$$56) v + 9 = 2v + 6$$

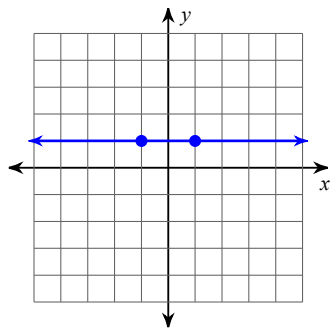
$$57) 2 - 2m = -14 + 2 + m - 7$$

**Find the slope of each line.**

58)



59)



**Find the slope of the line through each pair of points.**

60)  $(14, 0), (-11, -7)$

61)  $(3, 15), (17, 5)$

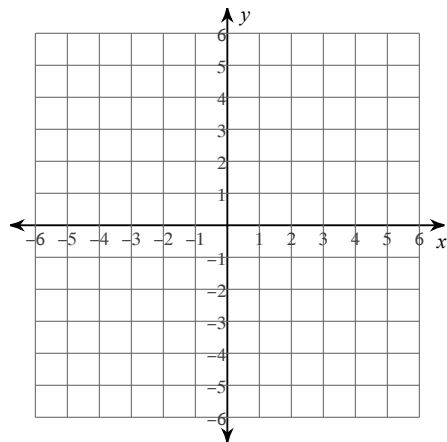
**Find the slope of each line.**

62)  $y = x + 1$

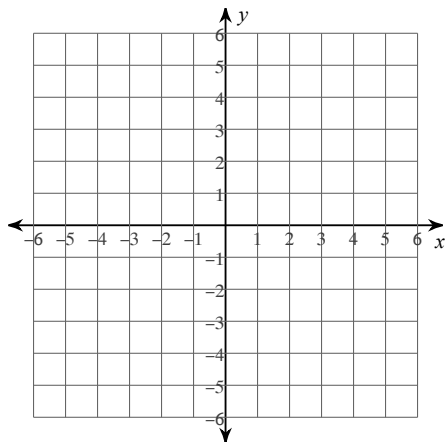
63)  $y = -\frac{1}{5}x + 1$

**Create an xy table of values and substitute x values to obtain at least four y values. Plot the points and sketch the line.**

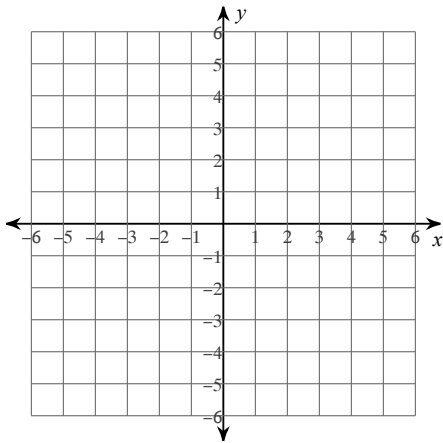
64)  $y = \frac{1}{2}x + 3$



65)  $y = -\frac{5}{4}x$



66)  $y = 1$

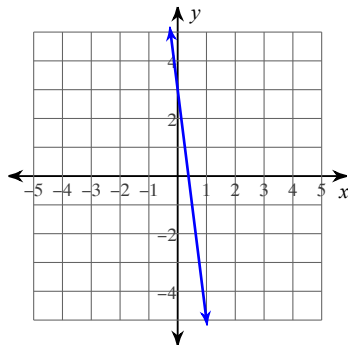


67) Consider the line  $x = 2$ . Is this vertical or horizontal? Is the slope undefined or zero?

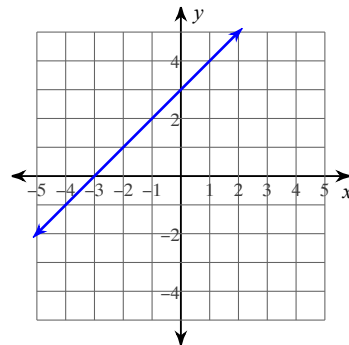
68) Consider the line  $y = 5$ . Is this vertical or horizontal? Is the slope undefined or zero?

**Write the slope-intercept form of the equation of each line.**

69)



70)



**Write the slope-intercept form of the equation of each line given the slope and y-intercept.**

71) Slope =  $\frac{7}{4}$ , y-intercept = 2

72) Slope = 9, y-intercept = -5

**Write the slope-intercept form of the equation of each line.**

**That is, isolate y so you have  $y = mx + b$  form.**

73)  $7x + 4y = -20$

74)  $x + 7y = -7$

**Write each as an algebraic expression.**

75) the sum of 11 and b

76) the product of q and 10

77) the quotient of p and 5

78) half of n

79) the difference of 30 and x

80) 8 less than u

81) n less than 24

82) 5 squared

**Solve each proportion.**

83)  $\frac{n}{2} = \frac{4}{8}$

84)  $\frac{6}{m} = \frac{8}{2}$

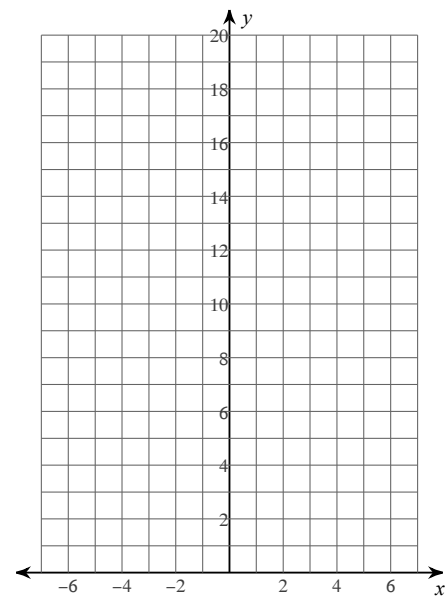
**Solve each problem.**

85) What percent of 135 is 121?

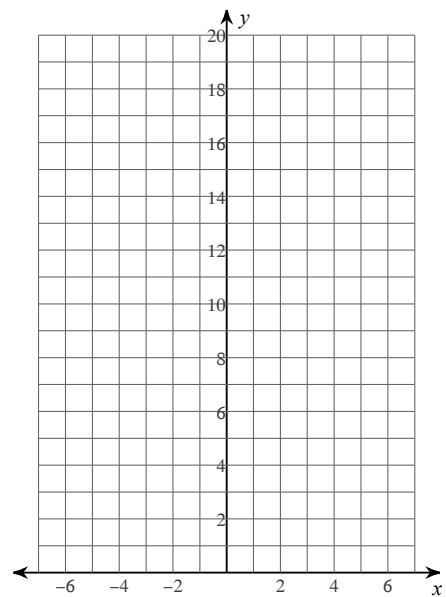
86) 68 is what percent of 135.5?

Create an xy table of values and substitute x values to obtain at least four y values. Plot the points and sketch the function.

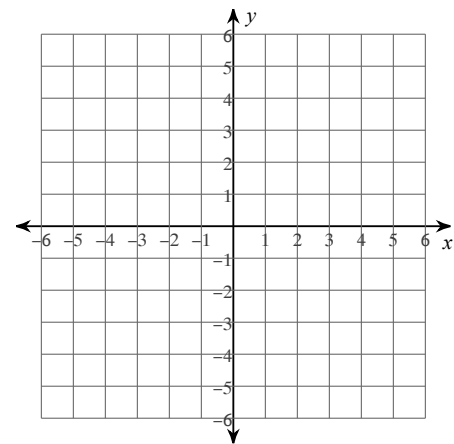
87)  $y = 2 \cdot 3^x$



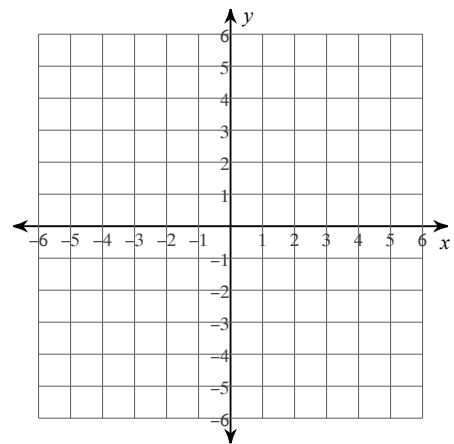
88)  $y = 4 \cdot 2^x$



89)  $y = |x + 1| + 3$



90)  $y = |x| - 1$



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