Algebra 1 Summer Packet Name _____

Evaluate each expression.

1) $(-6)+(-1)$ -7
2) $1+(-2)$ -1
3) $(-8)-1$ -9
4) $1-(-8)$ 9
5) $(-7)-6+(-4)$ -17
6) $(-3)-(-6)-2$ 1
7) $4-4-7$ -7
8) $(-3)-6-(-5)$ -4
9) $|4|$
10) $|-7|$
11) $\sqrt{81}$
12) $\sqrt{64}$

Find each product.

13) $(-3)(-9)$ 27
14) $(8)(-7)$ -56
15) $(-10)(-1)(-10)$ -100
16) $(3)(8)(-3)$ -72
17) $-5 * 0$ 0
18) $-5 * -1$ 5

Find each quotient.

19) $\frac{-8}{-1}$ 8
20) $-6 \div -2$ 3
21) $12 \div -6$ -2
22) $\frac{-30}{3}$ -10
23) $\frac{3}{0}$ undefined
24) $\frac{0}{9}$ 0

Evaluate each expression.

25) $-4+-5-(-6--5)$
-8
26) $-6-|2-6|$
-10
27) $\frac{3--5}{-4 \cdot -1}$
2
28) $(-3)^2|6|$
54

Find each sum.

29) $\frac{7}{8}+\frac{3}{2}$ $\frac{19}{8}$
30) $\frac{1}{4}+2\frac{1}{2}$ $\frac{11}{4}$

Find each difference.

31) $\frac{5}{7}-\frac{1}{2}$ $\frac{3}{14}$
32) $4\frac{3}{8}-\frac{1}{2}$ $\frac{31}{8}$

Find each product.

33) $1\frac{2}{5} \cdot \frac{1}{4}$ $\frac{7}{20}$
34) $2 \cdot \frac{5}{6}$ $\frac{5}{3}$

Find each quotient.

35) $\frac{1}{3} \div \frac{5}{8}$ $\frac{8}{15}$
36) $\frac{1}{2} \div 2$ $\frac{1}{4}$

Simplify each expression.

37) $-9b + 9b$

0

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

$9k - 9$

39) $-5(n - 10)$

$-5n + 50$

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

$-10 - 100r$

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

$34p + 35$

42) $4b + 5(-1 + 4b)$

$24b - 5$

43) $-7(10x - 6) - 2(8 + 5x)$

$-80x + 26$

44) $-8(1 + 3r) - 9(4 + 10r)$

$-44 - 114r$

Solve each equation.

45) $b - 20 = -20$

$\{0\}$

46) $n - 2 = 6$

$\{8\}$

47) $p - 12 = -20$

$\{-8\}$

48) $-27 = x - 16$

$\{-11\}$

49) $20x = 300$

$\{15\}$

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

$\{216\}$

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

$\{-154\}$

52) $\frac{x}{13} = -15$

$\{-195\}$

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

$\{-14\}$

54) $-2m - 6 = 34$

$\{-20\}$

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

$\{-11\}$

56) $4(x + 8) = 88$

$\{14\}$

57) $127 = -x + 4(5x + 8)$

$\{5\}$

58) $2(7a - 2) = -116$

$\{-8\}$

59) $105 = -5(-2v - 5)$

$\{8\}$

60) $224 = 6(3k + 4) + 7k$

$\{8\}$

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

$\{3\}$

62) $2 - 2m = -14 + 2 + m - 7$

$\{7\}$

63) $n - 7 = -5 + 3n$

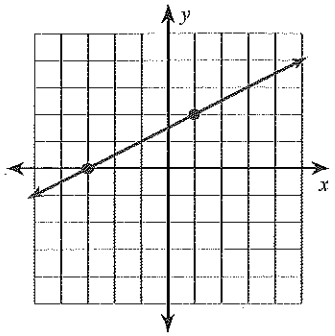
$\{-1\}$

64) $1 + 2x = 13 - x$

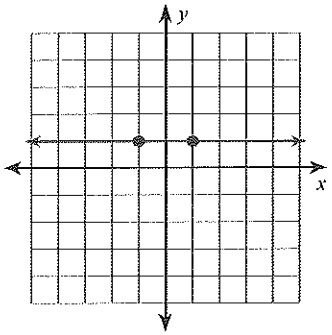
$\{4\}$

Find the slope of each line.

65) $\frac{1}{2}$



66)



0

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

67) $(14, 0), (-11, -7)$ $\frac{7}{25}$

68) $(3, 15), (17, 5)$ $-\frac{5}{7}$

Find the slope of each line.

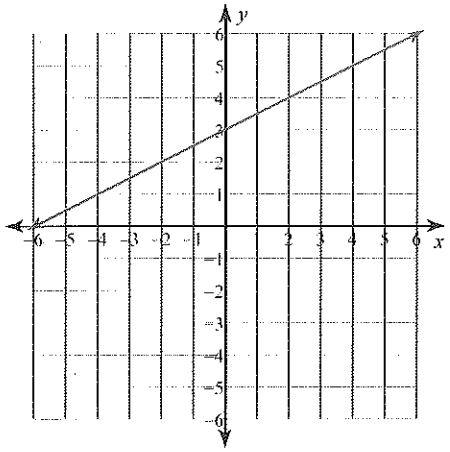
69) $y = x + 1$

1

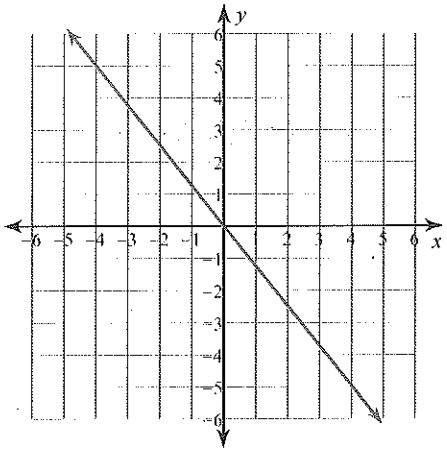
70) $y = -\frac{1}{5}x + 1$ $-\frac{1}{5}$

Sketch the graph of each line.

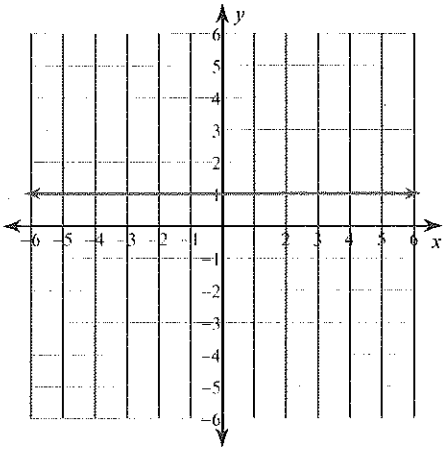
71) $y = \frac{1}{2}x + 3$



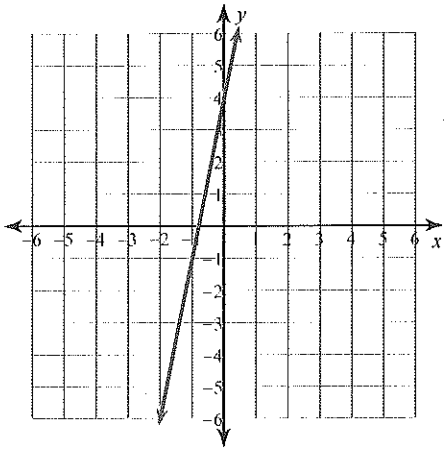
72) $y = -\frac{5}{4}x$



73) $y = 1$



74) $y = 5x + 4$



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

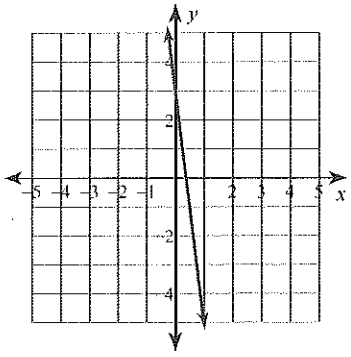
vertical, undefined

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

horizontal, zero

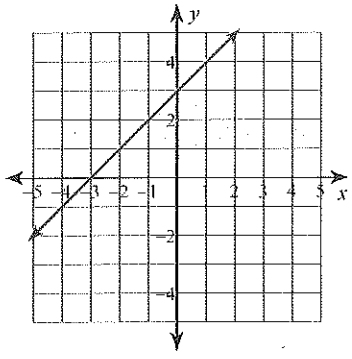
Write the slope-intercept form of the equation of each line.

77)



$y = -8x + 3$

78)



$y = x + 3$

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

79) Slope = $\frac{7}{4}$, y-intercept = 2 $y = \frac{7}{4}x + 2$

80) Slope = 9, y-intercept = –5

$y = 9x - 5$

Write the slope-intercept form of the equation of each line.
That is, isolate y so you have y = mx + b form.

81) $7x + 4y = -20$ $y = -\frac{7}{4}x - 5$

82) $x + 7y = -7$ $y = -\frac{1}{7}x - 1$

Write each as an algebraic expression.

83) the sum of 11 and b

$11 + b$

84) the product of q and 10

$q \cdot 10$

85) the quotient of p and 5

$\frac{p}{5}$

86) half of n

$\frac{n}{2}$

87) the difference of 30 and x

$30 - x$

88) 8 less than u

$u - 8$

89) n less than 24

$24 - n$

90) 5 squared

5^2

Solve each proportion.

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

$\{1\}$

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

$\{1.5\}$

Solve each problem.

93) What percent of 135 is 121?

89.6%

94) 68 is what percent of 135.5?

50.2%