Summer Practice Name_____

Algebra

Evaluate each expression.

1) $2 - (-7)$

2) $3 + (-3)$

3) $(-5) - (-5)$

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

5) $1 - 3 + 2$

6) $(-5) - 6 - (-6)$

7) $(-3) - 2 - 2 - (-7)$

8) $(-7) - (-2) - (-7) + 8$

9) $6 + (-1) + (-3) - (-8)$

10) $\frac{1}{5} + \left(-\frac{9}{5}\right)$

11) $\left(-1\frac{5}{8}\right) + \frac{5}{4}$

12) $\left(-\frac{5}{3}\right) - \left(-2\frac{3}{8}\right)$

13) $\left(-\frac{3}{2}\right) - \left(-\frac{7}{8}\right) + \left(-3\frac{1}{7}\right)$

14) $\left(-1\frac{3}{5}\right)+\frac{3}{2}+\left(-\frac{1}{2}\right)$

15) $\left(-\frac{3}{4}\right)+\left(-\frac{9}{5}\right)+\left(-\frac{9}{5}\right)$

16) $1.5-2.68$

17) $(-2.5)+(-3.8)$

18) $(-4.5)+2.3$

19) $(-7.7)+(-3.7)+3.4$

20) $0.5+(-0.2)+4.2$

21) $8+(-1.1)+5$

22) $(-6.4)-6.7+4.2-4.91$

23) $(-5.7)+(-8)-(-0.6)-(-3.5)$

24) $(-7.2)-(-3.1)+(-4.1)-(-7.2)$

Find each quotient.

25) $\frac{-10}{5}$

26) $\frac{27}{-9}$

27) $\frac{-100}{-10}$

28) $\frac{4\frac{4}{9}}{\frac{1}{3}}$

29) $\frac{4\frac{1}{2}}{-\frac{1}{2}}$

30) $\frac{-\frac{1}{8}}{\frac{1}{10}}$

31) $\frac{-3.5}{0.4}$

32) $\frac{-2.6}{-2.5}$

33) $\frac{-0.685}{4}$

Find each product.

34) $(-7)(4)$

35) $(-3)(-9)$

36) $(3)(-8)$

37) $\left(\frac{4}{3}\right)\left(-\frac{13}{10}\right)$

38) $\left(\frac{7}{8}\right)\left(-\frac{4}{3}\right)$

39) $\left(8\frac{2}{5}\right)\left(-\frac{9}{8}\right)$

40) $(-8.7)(-2.6)$

41) $(0.2)(-8.3)$

42) $(-9.8)(-7.89)$

Solve each equation.

43) $-2n + n = -6$

44) $-20 = 6x - x$

45) $5a + 4a = 18$

46) $108 = 4 + 8(x + 5)$

47) $228 = -4(8k + 7)$

48) $-8(5x + 2) = 304$

49) $77 = 7(-3 + 4v) + 7(6 - 8v)$

50) $58 = 2(2 - 3v) + 3(-3v + 8)$

51) $-4(3k + 3) - 8(6k - 4) = 20$

52) $\frac{1}{5}x + \frac{6}{5}x = -\frac{91}{30}$

53) $\frac{2}{5}x + \frac{4}{5}x = \frac{18}{25}$

54) $-11 = -\frac{11}{3}x - 2 - \frac{5}{3}$

55) $2r + r = -3r + 3r - 12$

56) $n + 4n = 4n - 5$

57) $-6n = -n - 5n$

58) $-18 - 6b = 6(3 - 3b)$

59) $8 + p = 2(-4p - 5)$

60) $-2(-6r + 2) = 28 + 4r$

61) $2(p - 2) - 4(1 + 2p) = 3p + 2 - 4p$

62) $-2(-5k + 4) - 6(3k + 3) = -8k - 5$

63) $3(1 + 4n) + 3 = 3(3n - 6)$

64) $6(6.5x + 7) = -231$

65) $129.192 = 4.2(7.4 + 3.2n)$

66) $105.8 = 7.1 - 4.7(2.3n - 2.6)$

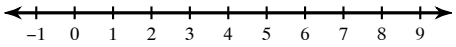
67) $7.1 + 3.1(0.2a - 5.2) = -14.844 - 1.2a$

68) $6.5(5.3k + 2.3) = 12.165 + 6.6k$

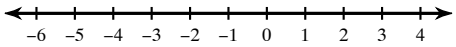
69) $7.236 + 0.191r = -5.6r - 1.6(1 - 5r)$

Solve each inequality and graph its solution.

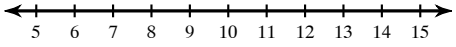
70) $3(6p - 1) \geq 123$



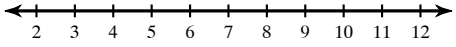
71) $-90 < -6(-3p + 3)$



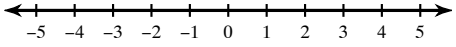
72) $-2(1 + 8k) + 2k < -100$



73) $6x + 2(5x + 1) > 130$



74) $84 < 7(4 + 8x)$



Solve each proportion.

75) $\frac{n}{48} = \frac{15}{6}$

76) $\frac{10}{x} = \frac{34}{28}$

77) $\frac{30}{5} = \frac{k}{41}$

78) $\frac{8}{17} = \frac{38}{m}$

79) $\frac{6}{v} = \frac{16}{24}$

80) $\frac{13}{31} = \frac{k - 48}{37}$

81) $\frac{28}{33} = \frac{23}{n - 26}$

82) $\frac{31}{22} = \frac{26}{n - 21}$

83) $\frac{n - 36}{6} = \frac{32}{40}$

84) $\frac{x + 9}{43} = \frac{14}{25}$

85) $\frac{43}{x} = \frac{3}{x + 50}$

86) $\frac{k - 20}{26} = \frac{5k}{50}$

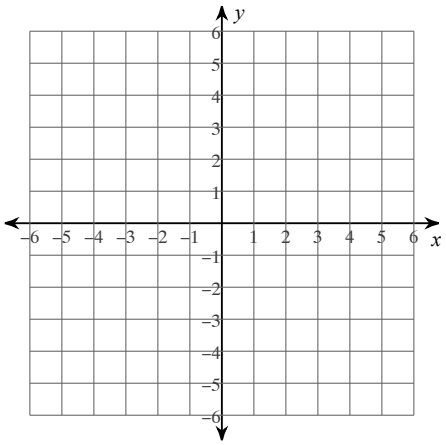
87) $\frac{n}{n - 45} = \frac{4}{19}$

88) $\frac{2}{29} = \frac{x - 20}{x}$

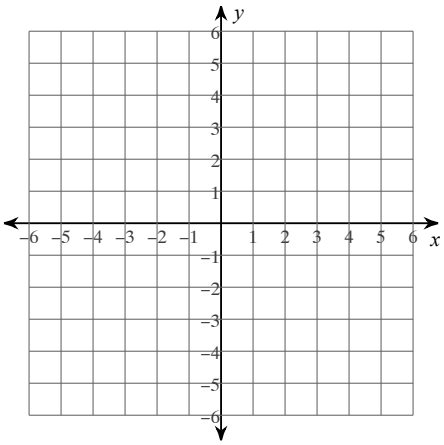
89) $\frac{a}{26} = \frac{a - 33}{3}$

Sketch the graph of each line.

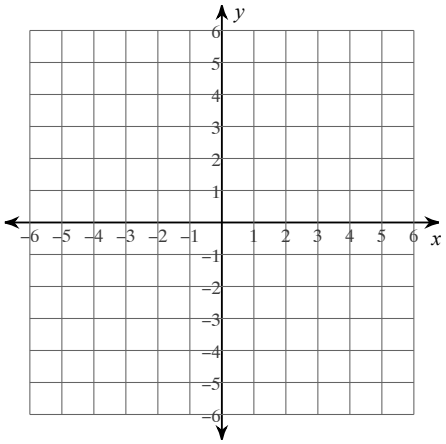
90) $y = \frac{1}{3}x$



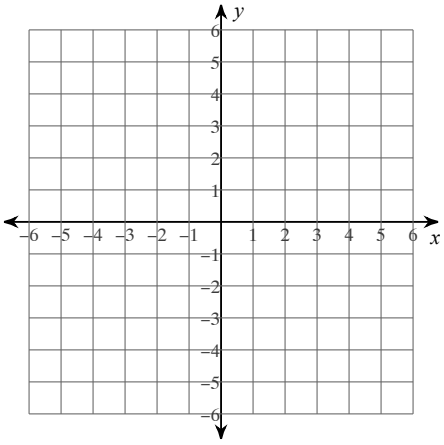
91) $y = -\frac{5}{2}x + 5$



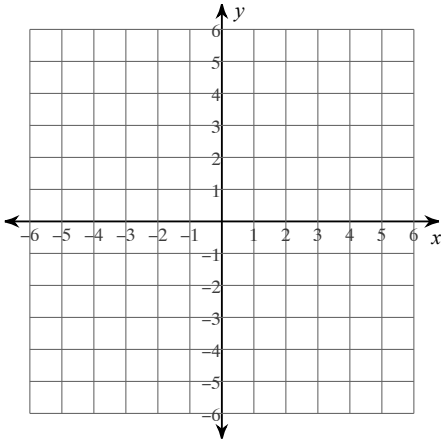
92) $y = \frac{1}{4}x + 1$



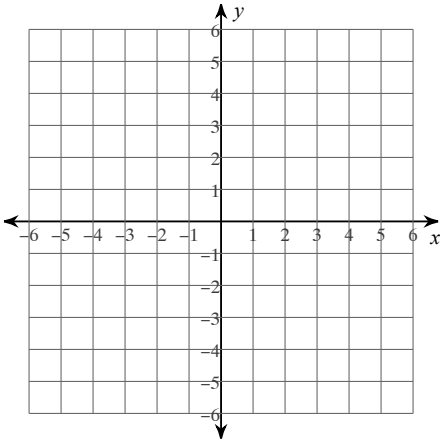
93) $5x - y = -3$



94) $3x - y = -2$

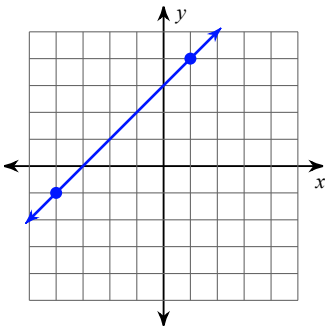


95) $x + y = -3$

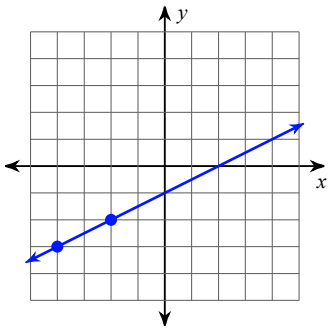


Find the slope of each line.

96)



97)



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

98) $(8, -9), (7, -5)$

99) $(19, -13), (17, -4)$

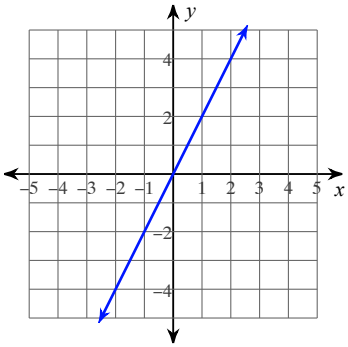
Find the slope of each line.

100) $y = -8x + 3$

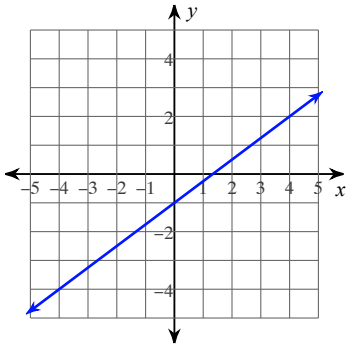
101) $y = 4x + 4$

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

102)



103)



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

104) Slope = 5, y-intercept = 0

105) Slope = $\frac{5}{3}$, y-intercept = 1

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

106) $5x + y = -2$

107) $x - 4y = 20$

Write the slope-intercept form of the equation of the line through the given points.

108) through: $(2, -1)$ and $(0, -4)$

109) through: $(0, -3)$ and $(2, -4)$

110) through: $(0, -4)$ and $(-1, 1)$

111) through: $(3, -3)$ and $(0, 2)$

112) through: $(0, -1)$ and $(3, -4)$

Summer Practice Name_____

Algebra

Evaluate each expression.

1) $2 - (-7)$

9

2) $3 + (-3)$

0

3) $(-5) - (-5)$

0

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

9

5) $1 - 3 + 2$

0

6) $(-5) - 6 - (-6)$

-5

7) $(-3) - 2 - 2 - (-7)$

0

8) $(-7) - (-2) - (-7) + 8$

10

9) $6 + (-1) + (-3) - (-8)$

10

10) $\frac{1}{5} + \left(-\frac{9}{5}\right)$

$-\frac{8}{5}$

11) $\left(-1\frac{5}{8}\right) + \frac{5}{4}$ $-\frac{3}{8}$

12) $\left(-\frac{5}{3}\right) - \left(-2\frac{3}{8}\right)$

$\frac{17}{24}$

13) $\left(-\frac{3}{2}\right) - \left(-\frac{7}{8}\right) + \left(-3\frac{1}{7}\right)$ $-\frac{211}{56}$

14) $\left(-1\frac{3}{5}\right)+\frac{3}{2}+\left(-\frac{1}{2}\right)$

$-\frac{3}{5}$

15) $\left(-\frac{3}{4}\right)+\left(-\frac{9}{5}\right)+\left(-\frac{9}{5}\right)$ $-\frac{87}{20}$

16) $1.5-2.68$

-1.18

17) $(-2.5)+(-3.8)$

-6.3

18) $(-4.5)+2.3$

-2.2

19) $(-7.7)+(-3.7)+3.4$

-8

20) $0.5+(-0.2)+4.2$

4.5

21) $8+(-1.1)+5$

11.9

22) $(-6.4)-6.7+4.2-4.91$

-13.81

23) $(-5.7)+(-8)-(-0.6)-(-3.5)$

-9.6

24) $(-7.2)-(-3.1)+(-4.1)-(-7.2)$

-1

Find each quotient.

25) $\frac{-10}{5}$

-2

26) $\frac{27}{-9}$

-3

27) $\frac{-100}{-10}$

10

28) $\frac{4\frac{4}{9}}{\frac{1}{3}}$

$\frac{40}{3}$

29) $\frac{4\frac{1}{2}}{-\frac{1}{2}}$

−9

30) $\frac{-\frac{1}{8}}{\frac{1}{10}}$

$-\frac{5}{4}$

31) $\frac{-3.5}{0.4}$

−8.75

32) $\frac{-2.6}{-2.5}$

1.04

33) $\frac{-0.685}{4}$

−0.17125

Find each product.

34) $(-7)(4)$

−28

35) $(-3)(-9)$

27

36) $(3)(-8)$

−24

37) $\left(\frac{4}{3}\right)\left(-\frac{13}{10}\right)$

$-\frac{26}{15}$

38) $\left(\frac{7}{8}\right)\left(-\frac{4}{3}\right)$ $-\frac{7}{6}$

39) $\left(8\frac{2}{5}\right)\left(-\frac{9}{8}\right)$ $-\frac{189}{20}$

40) $(-8.7)(-2.6)$

22.62

41) $(0.2)(-8.3)$

-1.66

42) $(-9.8)(-7.89)$

77.322

Solve each equation.

43) $-2n + n = -6$

$\{6\}$

44) $-20 = 6x - x$

$\{-4\}$

45) $5a + 4a = 18$

$\{2\}$

46) $108 = 4 + 8(x + 5)$

$\{8\}$

47) $228 = -4(8k + 7)$

$\{-8\}$

48) $-8(5x + 2) = 304$

$\{-8\}$

49) $77 = 7(-3 + 4v) + 7(6 - 8v)$

$\{-2\}$

50) $58 = 2(2 - 3v) + 3(-3v + 8)$

$\{-2\}$

51) $-4(3k + 3) - 8(6k - 4) = 20$

$\{0\}$

52) $\frac{1}{5}x + \frac{6}{5}x = -\frac{91}{30}$

$\left\{-\frac{13}{6}\right\}$

53) $\frac{2}{5}x + \frac{4}{5}x = \frac{18}{25}$ $\left\{\frac{3}{5}\right\}$

54) $-11 = -\frac{11}{3}x - 2 - \frac{5}{3}$

$\{2\}$

55) $2r + r = -3r + 3r - 12$

$\{-4\}$

56) $n + 4n = 4n - 5$

$\{-5\}$

57) $-6n = -n - 5n$

{ All real numbers. }

58) $-18 - 6b = 6(3 - 3b)$

$\{3\}$

59) $8 + p = 2(-4p - 5)$

$\{-2\}$

60) $-2(-6r + 2) = 28 + 4r$

$\{4\}$

61) $2(p - 2) - 4(1 + 2p) = 3p + 2 - 4p$

$\{-2\}$

62) $-2(-5k + 4) - 6(3k + 3) = -8k - 5$

No solution.

63) $3(1 + 4n) + 3 = 3(3n - 6)$

$\{-8\}$

64) $6(6.5x + 7) = -231$

$\{-7\}$

65) $129.192 = 4.2(7.4 + 3.2n)$

$\{7.3\}$

66) $105.8 = 7.1 - 4.7(2.3n - 2.6)$

$\{-8\}$

67) $7.1 + 3.1(0.2a - 5.2) = -14.844 - 1.2a$

$\{-3.2\}$

68) $6.5(5.3k + 2.3) = 12.165 + 6.6k$

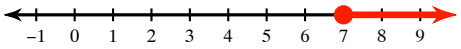
$\left\{-\frac{1}{10}\right\}$

69) $7.236 + 0.191r = -5.6r - 1.6(1 - 5r)$

$\{4\}$

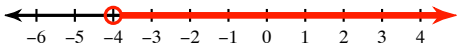
Solve each inequality and graph its solution.

70) $3(6p - 1) \geq 123$



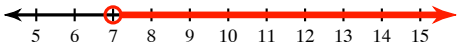
$p \geq 7$

71) $-90 < -6(-3p + 3)$



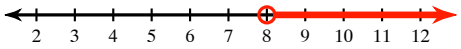
$p > -4$

72) $-2(1 + 8k) + 2k < -100$



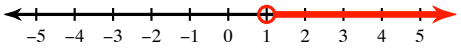
$k > 7$

73) $6x + 2(5x + 1) > 130$



$x > 8$

74) $84 < 7(4 + 8x)$



$x > 1$

Solve each proportion.

75) $\frac{n}{48} = \frac{15}{6}$

$\{120\}$

76) $\frac{10}{x} = \frac{34}{28}$

$\{8.24\}$

77) $\frac{30}{5} = \frac{k}{41}$

$\{246\}$

78) $\frac{8}{17} = \frac{38}{m}$

$\{80.75\}$

79) $\frac{6}{v} = \frac{16}{24}$

$\{9\}$

80) $\frac{13}{31} = \frac{k - 48}{37}$

$\{63.52\}$

81) $\frac{28}{33} = \frac{23}{n-26}$

$\{53.11\}$

82) $\frac{31}{22} = \frac{26}{n-21}$

$\{39.45\}$

83) $\frac{n-36}{6} = \frac{32}{40}$

$\{40.8\}$

84) $\frac{x+9}{43} = \frac{14}{25}$

$\{15.08\}$

85) $\frac{43}{x} = \frac{3}{x+50}$

$\{-53.75\}$

86) $\frac{k-20}{26} = \frac{5k}{50}$

$\{-12.5\}$

87) $\frac{n}{n-45} = \frac{4}{19}$

$\{-12\}$

88) $\frac{2}{29} = \frac{x-20}{x}$

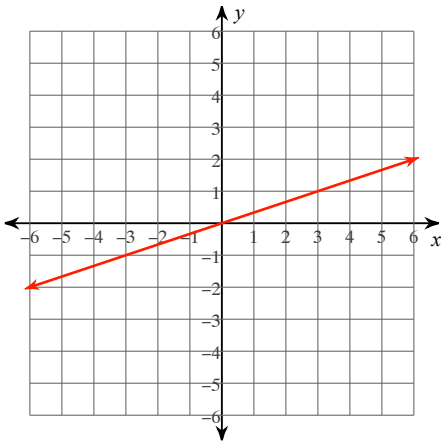
$\{21.48\}$

89) $\frac{a}{26} = \frac{a-33}{3}$

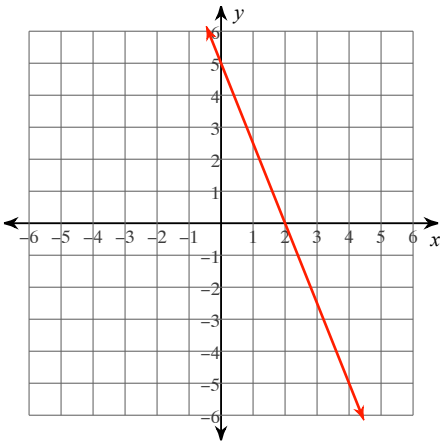
$\{37.3\}$

Sketch the graph of each line.

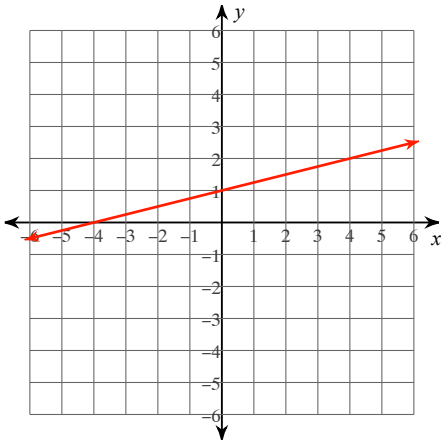
90) $y = \frac{1}{3}x$



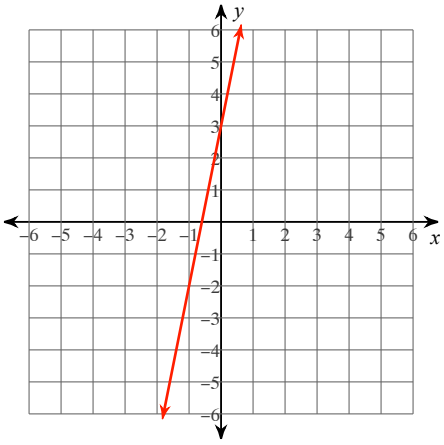
91) $y = -\frac{5}{2}x + 5$



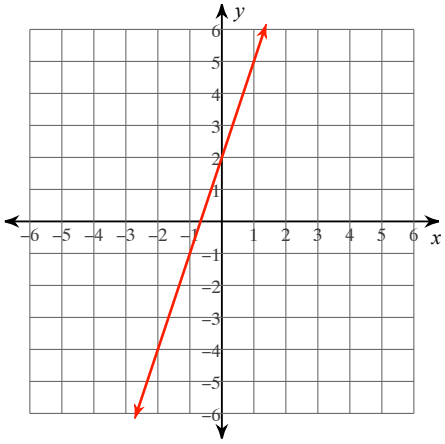
92) $y = \frac{1}{4}x + 1$



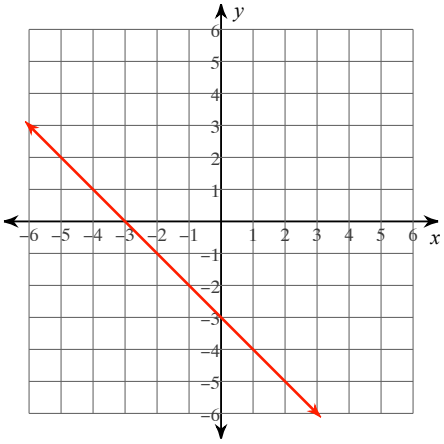
93) $5x - y = -3$



94) $3x - y = -2$

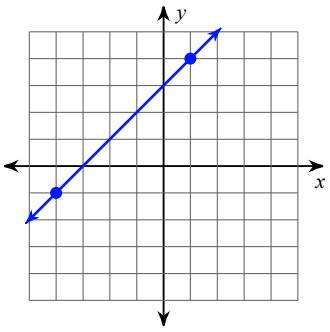


95) $x + y = -3$



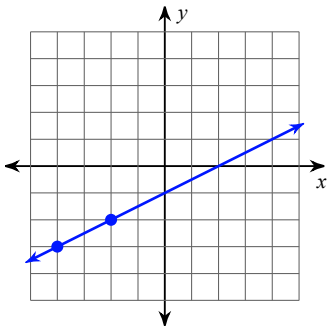
Find the slope of each line.

96)



1

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



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

98) $(8, -9), (7, -5)$

-4

99) $(19, -13), (17, -4)$

$-\frac{9}{2}$

Find the slope of each line.

100) $y = -8x + 3$

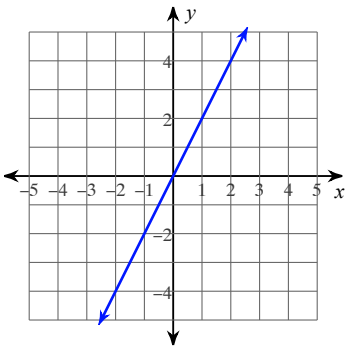
-8

101) $y = 4x + 4$

4

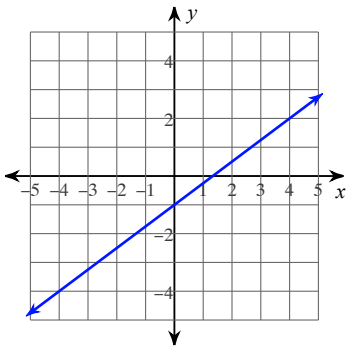
Write the slope-intercept form of the equation of each line.

102)



$y = 2x$

103)



$y = \frac{3}{4}x - 1$

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

104) Slope = 5, y-intercept = 0

$y = 5x$

105) Slope = $\frac{5}{3}$, y-intercept = 1

$y = \frac{5}{3}x + 1$

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

106) $5x + y = -2$

$y = -5x - 2$

107) $x - 4y = 20$

$y = \frac{1}{4}x - 5$

Write the slope-intercept form of the equation of the line through the given points.

108) through: $(2, -1)$ and $(0, -4)$ $y = \frac{3}{2}x - 4$

109) through: $(0, -3)$ and $(2, -4)$

$y = -\frac{1}{2}x - 3$

110) through: $(0, -4)$ and $(-1, 1)$

$y = -5x - 4$

111) through: $(3, -3)$ and $(0, 2)$

$y = -\frac{5}{3}x + 2$

112) through: $(0, -1)$ and $(3, -4)$

$y = -x - 1$