

**Assignment**

Date \_\_\_\_\_ Period \_\_\_\_\_

- 1) Matt left the science museum and traveled toward his friend's house at an average speed of 30 mph. Sumalee left one hour later and traveled in the same direction but with an average speed of 40 mph. Find the number of hours Matt traveled before Sumalee caught up.
- 2) Mofor left the movie theater and traveled toward the lake at an average speed of 25 mph. Sumalee left two hours later and traveled in the opposite direction with an average speed of 55 mph. Find the number of hours Sumalee needs to travel before they are 130 mi. apart.
- 3) A fishing boat left Port 37 and traveled south. Four hours later an aircraft carrier left traveling 12 km/h faster in an effort to catch up to it. After five hours the aircraft carrier finally caught up. Find the fishing boat's average speed.
- 4) Lea left home and drove toward her friend's house at an average speed of 24 mph. Dan left two hours later and drove in the same direction but with an average speed of 40 mph. How long did Lea drive before Dan caught up?
- 5) Aliyah drove to her friend's house and back. It took 0.4 hours longer to go there than it did to come back. The average speed on the trip there was 28.5 km/h. The average speed on the way back was 31.5 km/h. How many hours did the trip there take?
- 6) Scott traveled to the train station and back. It took 1.2 hours less time to get there than it did to get back. The average speed on the trip there was 60.9 km/h. The average speed on the way back was 43.5 km/h. How many hours did the trip there take?

**Solve each question. Round your answer to the nearest hundredth.**

- 7) Kim can oil the lanes in a bowling alley in six hours. Huong can oil the same lanes in seven hours. How long would it take them if they worked together?
- 8) Working alone, Aliyah can sweep a porch in six minutes. Dan can sweep the same porch in eight minutes. Find how long it would take them if they worked together.
- 9) Working alone, Julio can harvest a field in 12.3 hours. Stefan can harvest the same field in 10.9 hours. If they worked together how long would it take them?
- 10) Working alone, Mary can dig a 10 ft by 10 ft hole in 9.8 hours. Paul can dig the same hole in 8.6 hours. How long would it take them if they worked together?
- 11) Jennifer can tar a roof in 17 hours. Eduardo can tar the same roof in 16 hours. If they worked together how long would it take them?
- 12) Working together, Gabriella and Chelsea can pick forty bushels of apples in 6.46 hours. Had she done it alone it would have taken Chelsea 14 hours. Find how long it would take Gabriella to do it alone.

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

- 13)  $(4, -10), (19, 13)$
- 14)  $(1, 20), (-18, 20)$

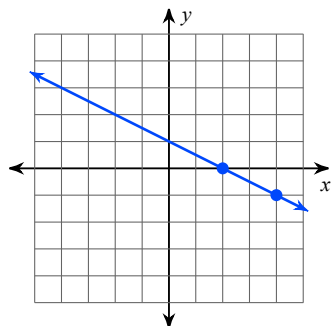
**Find the value of x or y so that the line through the points has the given slope.**

15)  $(1, y)$  and  $(-5, -6)$ ; slope:  $\frac{7}{3}$

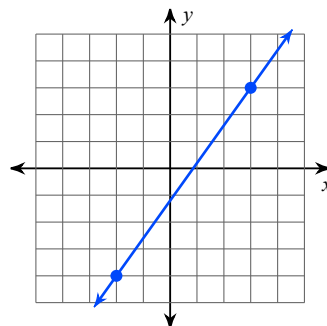
16)  $(5, -7)$  and  $(x, 7)$ ; slope: undefined

**Find the slope of each line.**

17)



18)



19)  $y = \frac{1}{2}x$

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

21)  $x - 3y = -9$

22)  $x - 3y = 9$

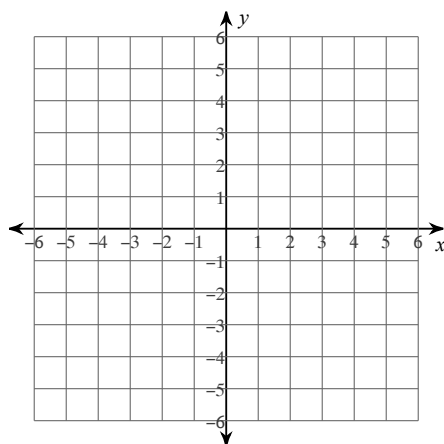
**Find the slope of a line perpendicular to each given line.**

23)  $-3x - 15 = 0$

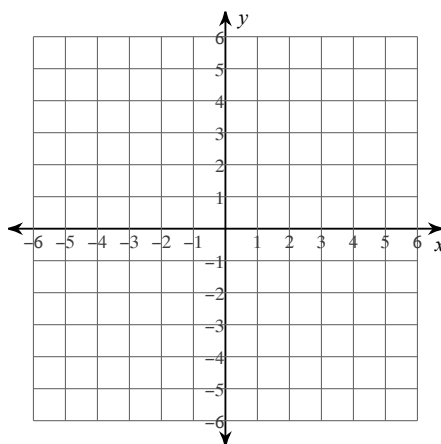
24)  $4 = -y - x$

**Sketch the graph of each line.**

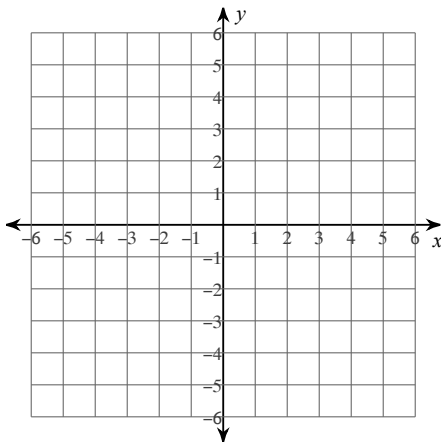
25) x-intercept =  $-3$ , y-intercept =  $4$



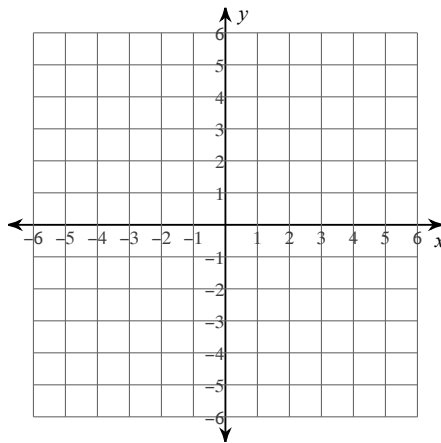
26)  $y = 1$



27)  $x = 2$

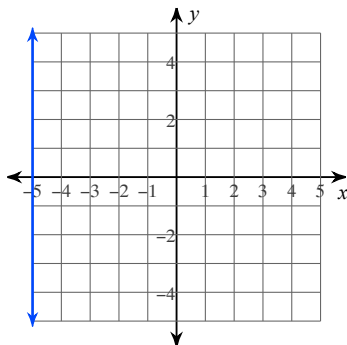


28)  $-10x = -15 + 3y$

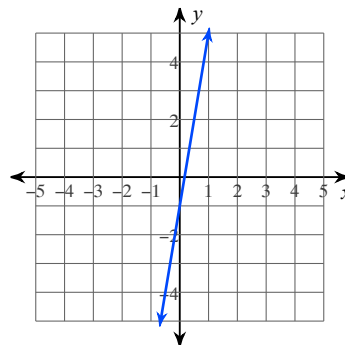


**Write the slope-intercept form of the equation of each line.**

29)



30)



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

31) Slope =  $-\frac{1}{3}$ , y-intercept = 2

32) Slope = -1, y-intercept = 4

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

33)  $x - 4y = 24$

34)  $3x - 2y = -7$

**Write the slope-intercept form of the equation of the line through the given point with the given slope.**

35) through:  $(3, -2)$ , slope =  $-\frac{1}{3}$

36) through:  $(-5, -5)$ , slope =  $\frac{4}{5}$

**Write the point-slope form of the equation of the line through the given point with the given slope.**

37) through:  $(-4, 4)$ , slope  $= -\frac{3}{2}$

38) through:  $(-4, -2)$ , slope  $= \frac{3}{4}$

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

39) through:  $(-5, 5)$  and  $(-2, -1)$

40) through:  $(2, -2)$  and  $(2, 5)$

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

41) through:  $(-5, 4)$  and  $(3, 4)$

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

**Write the point-slope form of the equation of the line described.**

43) through:  $(-1, 0)$ , parallel to  $y = -4x - 1$

44) through:  $(-2, 0)$ , parallel to  $y = 4$

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

45) through:  $(5, 4)$ , parallel to  $y = \frac{6}{5}x + 2$

46) through:  $(-1, -3)$ , parallel to  $y = 4$

**Write the point-slope form of the equation of the line described.**

47) through:  $(-1, 4)$ , perp. to  $y = \frac{1}{5}x + 2$

48) through:  $(-3, -3)$ , perp. to  $y = -x + 3$

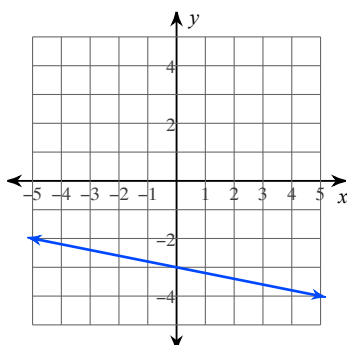
**Write the slope-intercept form of the equation of the line described.**

49) through:  $(-4, 4)$ , perp. to  $y = \frac{2}{3}x - 3$

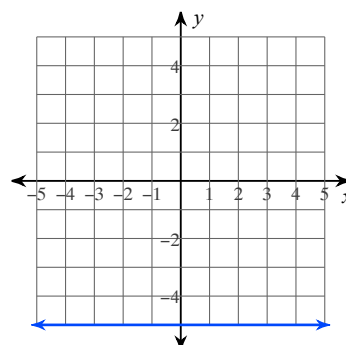
50) through:  $(4, 3)$ , perp. to  $y = -\frac{4}{5}x - 3$

**Write the standard form of the equation of each line.**

51)



52)



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

53) Slope =  $-1$ , y-intercept =  $2$

54) Slope =  $-\frac{2}{3}$ , y-intercept =  $2$

**Write the standard form of the equation of each line.**

55)  $y = -\frac{11}{6}x - 5$

56)  $y = \frac{5}{6}x + 4$

57)  $y - 1 = -(x + 3)$

58)  $y + 2 = -\frac{1}{2}(x + 4)$

**Write the standard form of the equation of the line through the given point with the given slope.**

59) through:  $(-5, 3)$ , slope =  $-\frac{4}{5}$

60) through:  $(-3, -2)$ , slope =  $-\frac{2}{3}$

**Write the standard form of the equation of the line through the given points.**

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

62) through:  $(0, -5)$  and  $(-4, 5)$

**Write the standard form of the equation of the line described.**

63) through:  $(-1, -4)$ , parallel to  $y = 7x - 4$

64) through:  $(5, 3)$ , parallel to  $y = -\frac{1}{5}x + 3$

65) through:  $(2, 4)$ , perp. to  $y = -\frac{1}{2}x - 2$

66) through:  $(-3, 4)$ , perp. to  $y = 2$

# Answers to Assignment (ID: 1)

1) 4 hours

5) 4.2 hours

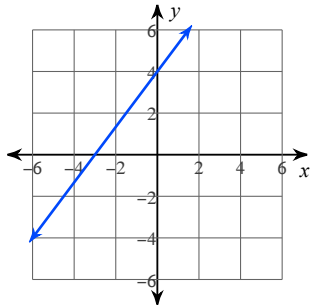
9) 5.78 hours

13)  $\frac{23}{15}$

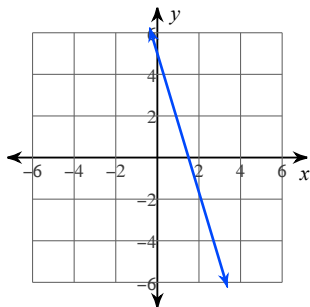
17)  $-\frac{1}{2}$

21)  $\frac{1}{3}$

25)



28)



2) 1 hour

6) 3 hours

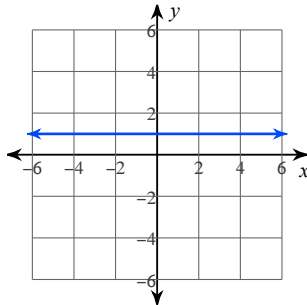
10) 4.58 hours

14) 0

18)  $\frac{7}{5}$

22)  $\frac{1}{3}$

26)



29)  $x = -5$

3) 15 km/h

7) 3.23 hours

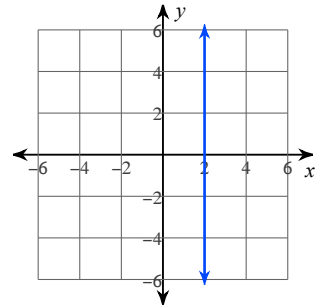
11) 8.24 hours

15) 8

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

23) 0

27)



30)  $y = 6x - 1$

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

35)  $y = -\frac{1}{3}x - 1$

39)  $y - 5 = -2(x + 5)$

43)  $y = -4(x + 1)$

47)  $y - 4 = -5(x + 1)$

51)  $x + 5y = -15$

55)  $11x + 6y = -30$

59)  $4x + 5y = -5$

63)  $7x - y = -3$

32)  $y = -x + 4$

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

40)  $0 = x - 2$

44)  $y = 0$

48)  $y + 3 = x + 3$

52)  $y = -5$

56)  $5x - 6y = -24$

60)  $2x + 3y = -12$

64)  $x + 5y = 20$

33)  $y = \frac{1}{4}x - 6$

37)  $y - 4 = -\frac{3}{2}(x + 4)$

41)  $y = 4$

45)  $y = \frac{6}{5}x - 2$

49)  $y = -\frac{3}{2}x - 2$

53)  $x + y = 2$

57)  $x + y = -2$

61)  $5x - 2y = -6$

65)  $2x - y = 0$

4) 5 hours

8) 3.43 minutes

12) 11.99 hours

16) 5

20)  $-\frac{3}{5}$

24) 1

34)  $y = \frac{3}{2}x + \frac{7}{2}$

38)  $y + 2 = \frac{3}{4}(x + 4)$

42)  $y = -\frac{1}{4}x - 1$

46)  $y = -3$

50)  $y = \frac{5}{4}x - 2$

54)  $2x + 3y = 6$

58)  $x + 2y = -8$

62)  $5x + 2y = -10$

66)  $x = -3$