

## Assignment

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

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

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

2) through:  $(-1, 2)$ , slope =  $-1$

3) through:  $(1, -5)$ , slope =  $-8$

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

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

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

6) through:  $(4, -4)$  and  $(2, -5)$

7) through:  $(0, 5)$  and  $(4, 4)$

8) through:  $(4, 0)$  and  $(0, 0)$

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

9)  $y - 2 = \frac{1}{2}(x - 1)$

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

11)  $y + 2 = \frac{1}{5}(x - 5)$

12)  $y + 3 = \frac{5}{4}(x + 4)$

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

13) through:  $(1, 4)$  and  $(3, -1)$

14) through:  $(0, 5)$  and  $(-1, -5)$

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

16) through:  $(-3, 0)$  and  $(3, -3)$

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

17)  $7x + 3y = -6$

18)  $10x + 7y = -28$

19)  $x + 2y = 0$

20)  $y = -8$

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

21)  $y = 7x - 3$

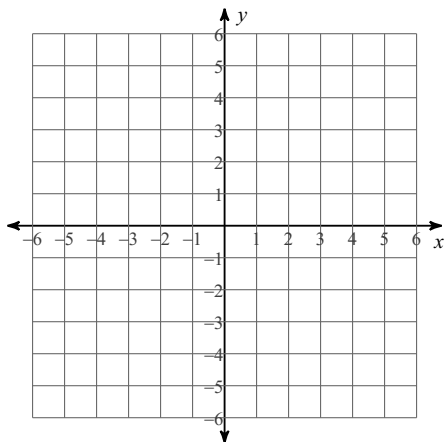
22)  $y = \frac{7}{6}x - 2$

$$23) y = \frac{1}{6}x - 4$$

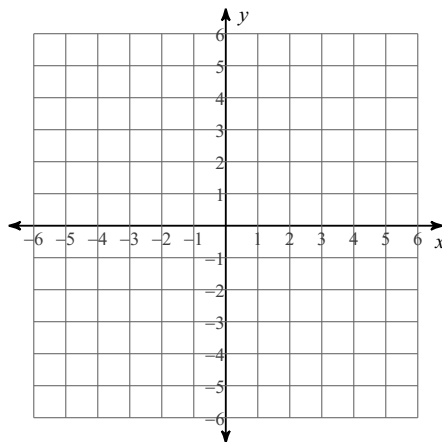
$$24) y = -2$$

Sketch the graph of each line.

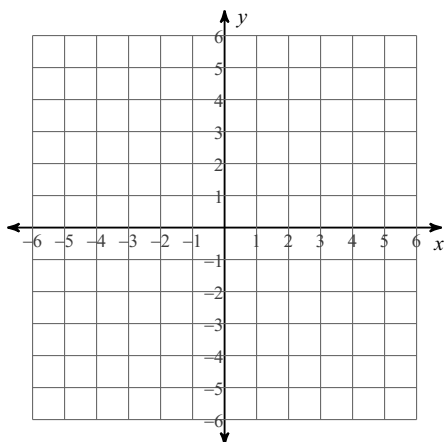
$$25) y = 5$$



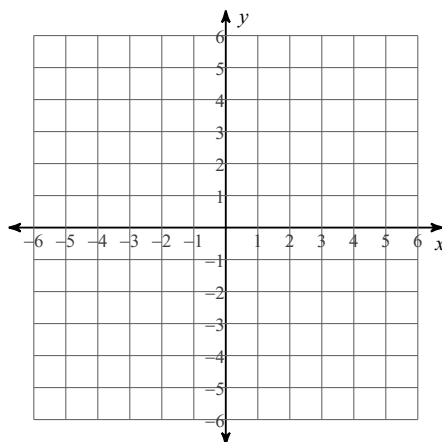
$$26) x - y = 4$$



$$27) 5x + 2y = 0$$

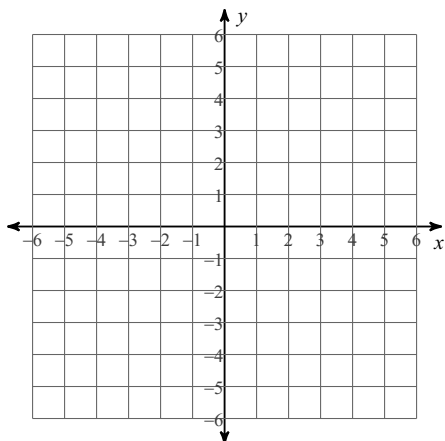


$$28) x + y = -4$$

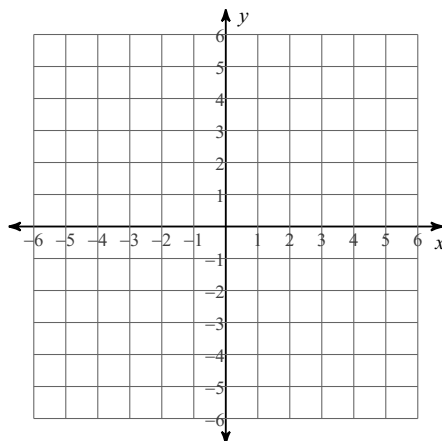


Find the x- and y- intercepts. Sketch the graph of each line.

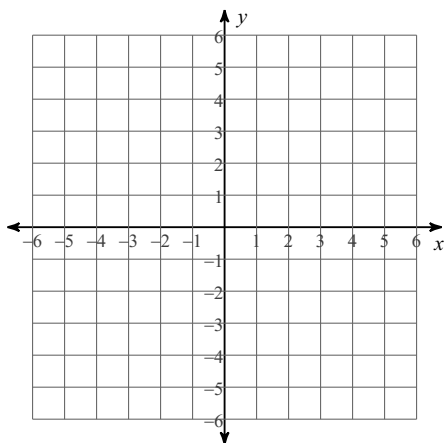
$$29) 4x + 5y = -5$$



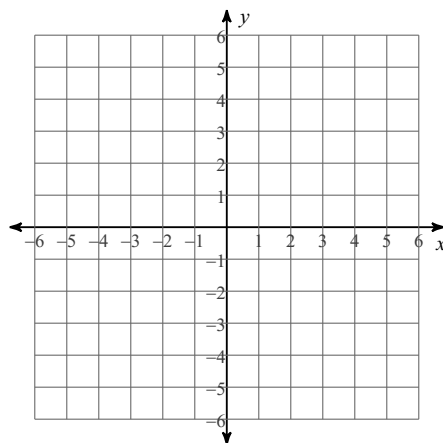
$$30) 2x - 3y = 15$$



31)  $4x - 5y = 0$



32)  $x = 0$



**Solve each system by substitution.**

33)  $y = -5x - 7$   
 $6x + 3y = -12$

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

35)  $y = 6x - 24$   
 $y = 5x - 21$

36)  $y = x + 10$   
 $y = 2x + 13$

37)  $-6x - 6y = 12$   
 $5x + y = -6$

38)  $2x - 5y = -18$   
 $-3x + y = 14$

39)  $-3x - 5y = 5$   
 $y = -4$

40)  $-7x - 7y = -7$   
 $x + 5y = 17$

**Solve each system by elimination.**

41)  $2x - 7y = 1$   
 $x + 7y = 11$

42)  $-7x + 6y = 27$   
 $6x - 6y = -18$

43)  $10x - 9y = -27$   
 $-20x + 8y = 24$

44)  $x - 9y = 28$   
 $2x + y = -20$

45)  $9x - 5y = -3$   
 $-5x + 8y = -14$

46)  $-3x + 5y = 11$   
 $-7x + 2y = 16$

47)  $-2x - 3y = 22$   
 $-3x + 5y = -24$

48)  $-3x - 5y = -14$   
 $5x + 3y = 18$

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

49) through:  $(5, -3)$ , parallel to  $y = -x - 3$

50) through:  $(1, -2)$ , parallel to  $y = -4x + 5$

51) through:  $(-5, -1)$ , parallel to  $y = -\frac{1}{2}x - 1$

52) through:  $(-2, 2)$ , parallel to  $y = -3x - 3$

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

54) through:  $(1, -1)$ , perp. to  $x = 0$

55) through:  $(2, -2)$ , perp. to  $y = x - 1$

56) through:  $(4, 5)$ , perp. to  $y = -2x - 3$

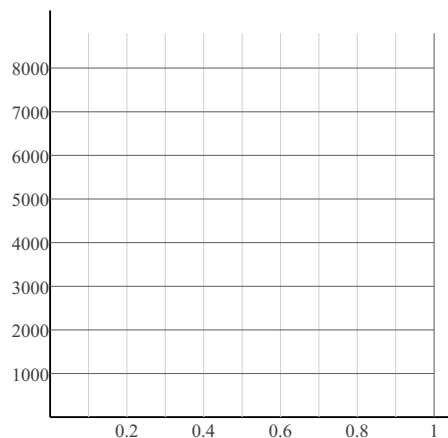
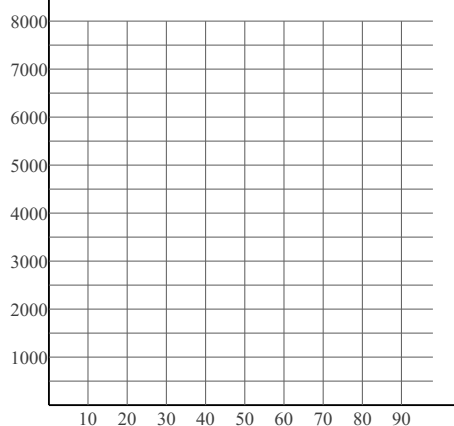
**Construct a scatter plot. State if there appears to be a positive correlation, negative correlation, or no correlation. When there is a correlation, identify the relationship as linear, quadratic, or exponential. Also find the slope-intercept form of the equation of the line that best fits the data.**

57)

X	Y	X	Y
4	8,000	64	2,000
29	4,000	72	2,000
50	3,000	74	2,000
50	3,000	92	2,000
53	2,000	98	2,000

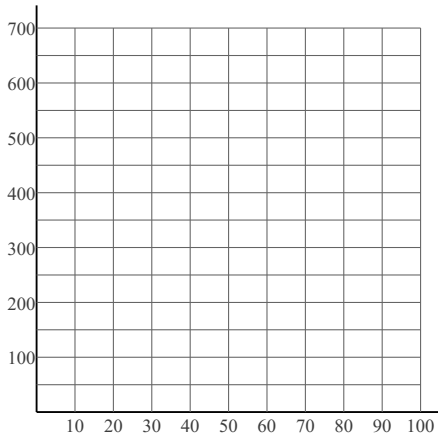
58)

X	Y	X	Y
0.3	3,100	0.7	2,900
0.4	8,000	0.8	400
0.6	6,000	0.8	600
0.6	6,700	0.8	8,800
0.7	1,000	1	6,300



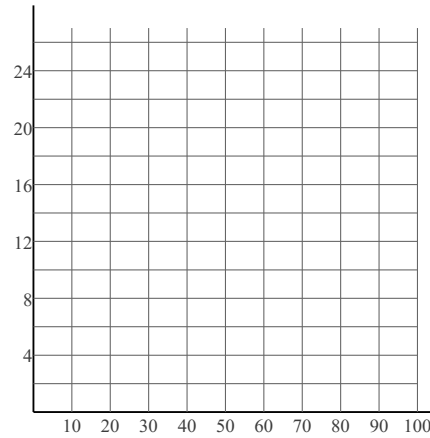
59)

X	Y	X	Y	X	Y
10	200	30	300	60	400
20	200	40	300	80	600
20	200	50	400	100	700
20	300				



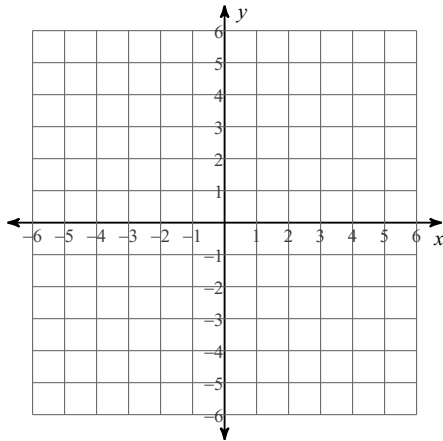
60)

X	Y	X	Y	X	Y
21	7	56	17	81	24
22	5	68	21	90	22
23	7	80	17	100	27
39	13				

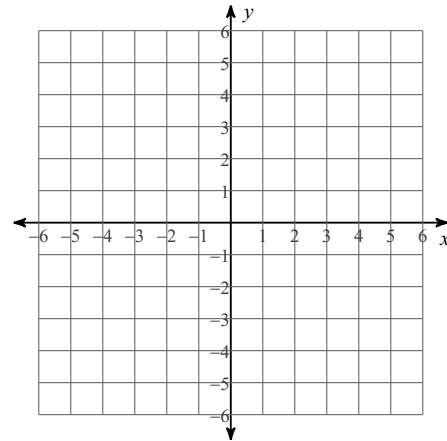


**Graph each equation.**

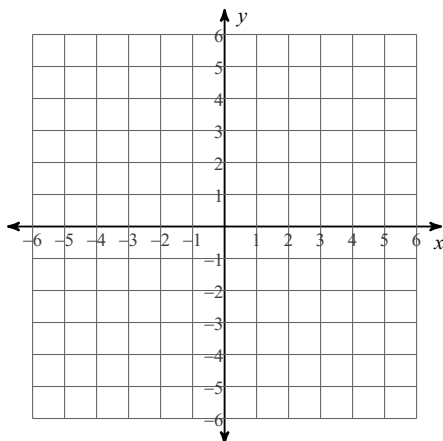
61)  $y = -|x| + 1$



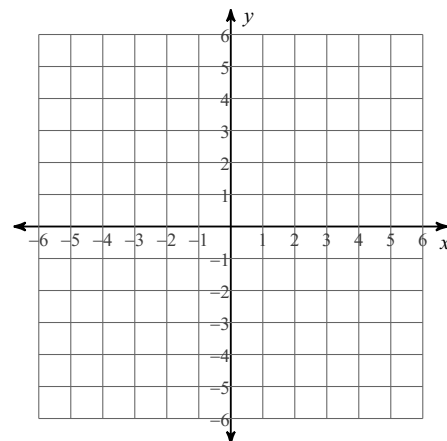
62)  $y = |x| - 1$



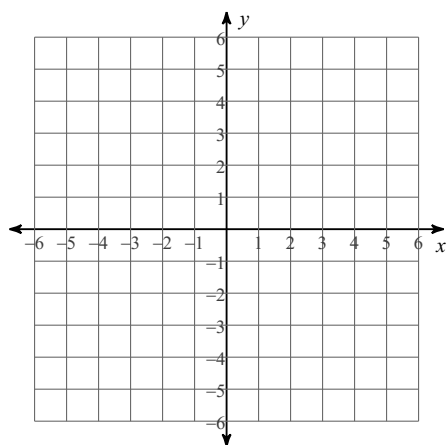
63)  $y = |x - 2| - 3$



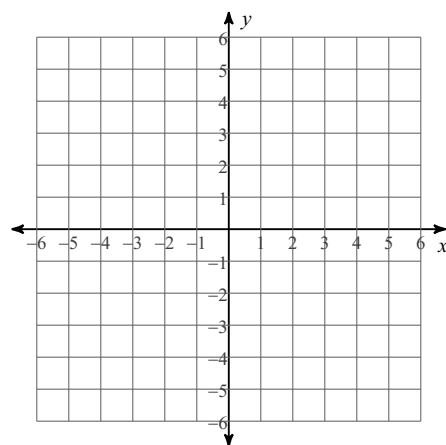
64)  $y = -|x + 2| + 1$



65)  $y = |x - 4|$



66)  $y = -|x - 2|$



## Answers to Assignment (ID: 1)

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

2)  $y - 2 = -(x + 1)$

3)  $y + 5 = -8(x - 1)$

4)  $y + 3 = -\frac{5}{3}(x - 3)$

5)  $y - 4 = 2x$

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

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

8)  $y = 0$

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

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

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

12)  $y = \frac{5}{4}x + 2$

13)  $y = -\frac{5}{2}x + \frac{13}{2}$

14)  $y = 10x + 5$

15)  $y = \frac{1}{4}x - 2$

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

17)  $y = -\frac{7}{3}x - 2$

18)  $y = -\frac{10}{7}x - 4$

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

20)  $y = -8$

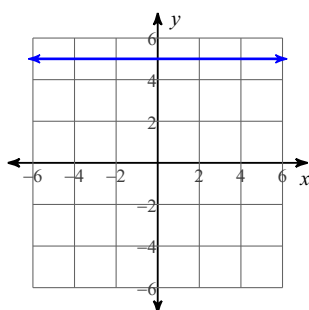
21)  $7x - y = 3$

22)  $7x - 6y = 12$

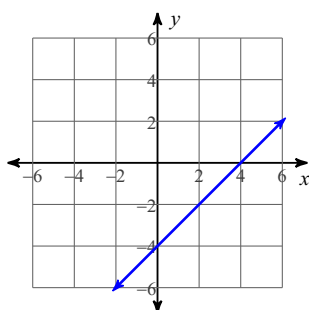
23)  $x - 6y = 24$

24)  $y = -2$

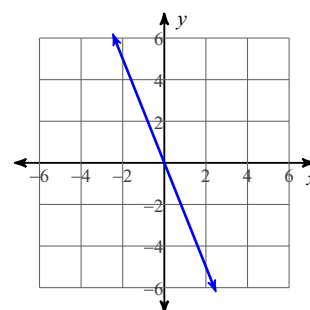
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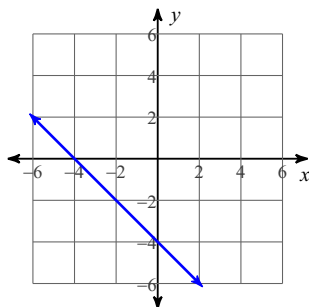
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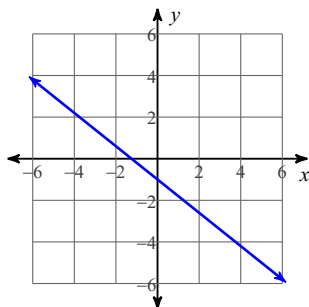
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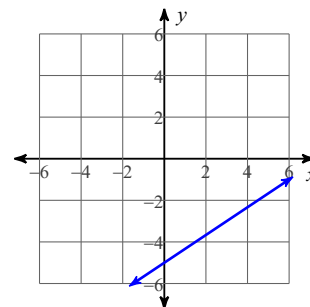
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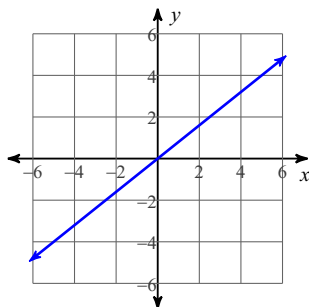
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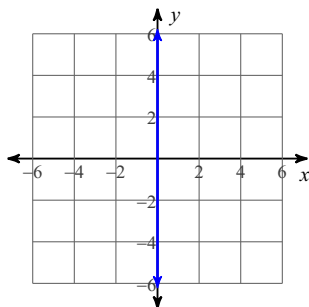
30)



31)



32)



33)  $(-1, -2)$

34)  $(-3, -4)$

35)  $(3, -6)$

36)  $(-3, 7)$

37)  $(-1, -1)$

38)  $(-4, 2)$

39)  $(5, -4)$

40)  $(-3, 4)$

41)  $(4, 1)$

42)  $(-9, -6)$

43)  $(0, 3)$

44)  $(-8, -4)$

45)  $(-2, -3)$

46)  $(-2, 1)$

47)  $(-2, -6)$

48)  $(3, 1)$

49)  $y = -x + 2$

50)  $y = -4x + 2$

51)  $y = -\frac{1}{2}x - \frac{7}{2}$

52)  $y = -3x - 4$

53)  $x = -2$

54)  $y = -1$

55)  $y = -x$

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

