Name _____ Class _____ Date _____

Practice 6-4

Point-Slope Form and Writing Linear Equations

Write an equation in point-slope form for the line through the given points or through the given point with the given slope.

1. $(5, 7), (6, 8)$
2. $(-2, 3); m = -1$
3. $(1, 2), (3, 8)$
4. $(-2, 3); m = 4$
5. $(4, 7); m = \frac{3}{2}$
6. $(6, -2); m = -\frac{4}{3}$
7. $(0, 5), (-3, 2)$
8. $(8, 11), (6, 16)$
9. $(4, 2), (-4, -2)$
10. $(15, 16), (13, 10)$
11. $(0, -7); m = -4$
12. $(-3, 4), (1, 6)$
13. $(1, 2); m$ undefined
14. $(-6, 7); m = -\frac{1}{2}$
15. $(21, -2), (27, 2)$
16. $(7, 5); m = 0$
17. $(8, -2), (14, 1)$
18. $(4, 8), (2, 12)$
19. $(-5, 13), (-10, 9)$
20. $(6, 2); m = \frac{3}{4}$
21. $(5, -3); m = -2$
22. $(4, 3.5); m = 0.5$
23. $(-6, 2); m = \frac{5}{3}$
24. $(100, 90), (80, 120)$
25. $(-3, 6), (3, -6)$
26. $(11, 7), (9, 3)$
27. $(2, 7); m = \frac{5}{2}$
28. $(-9, 8); m = -\frac{5}{3}$

Is the relationship shown by the data linear? If it is, model the data with an equation.

29.

x	y
2	3
3	7
4	11
5	15

30.

x	y
−3	4
−1	6
1	7
3	10

31.

x	y
−4	12
−1	8
5	−4
10	−8

32.

x	y
−2	5
3	−5
7	−13
11	−21

33.

x	y
−6	−5
−2	1
0	4
8	16

34.

x	y
−6	11
−3	9
6	3
15	−3

35.

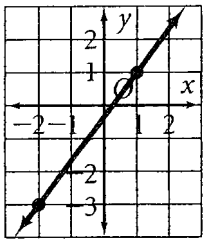
x	y
−7	−3
−5	0
−1	3
3	7

36.

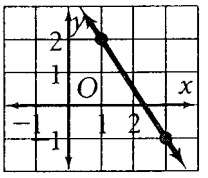
x	y
−4	1
2	4
6	6
14	10

Write an equation of each line in point-slope form.

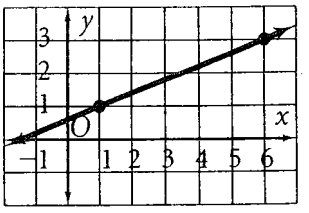
37.



38.



39.



Name _____ Class _____ Date _____

Practice 6-3

Standard Form

Graph each equation using *x*- and *y*-intercepts.

1. $x + y = 3$
2. $x + 3y = -3$
3. $-2x + 3y = 6$
4. $5x - 4y = -20$
5. $3x + 4y = 12$
6. $7x + 3y = 21$
7. $y = -2.5$
8. $2x - 3y = 4$
9. $x = 3$
10. $3x - 2y = -6$
11. $5x + 2y = 5$
12. $-7x + 2y = 14$
13. $3x + y = 3$
14. $-3x + 5y = 15$
15. $2x + y = 3$
16. $8x - 3y = 24$
17. $3x - 5y = 15$
18. $x + 4y = 4$
19. $x = -3.5$
20. $y = 6$

Write each equation in standard form using integers.

21. $y = 4x - 11$
22. $y = 2x - 6$
23. $y = -2x - 3$
24. $y = 5x - 32$
25. $y = \frac{2}{3}x - \frac{25}{3}$
26. $y = 43 - 4x$
27. $y = -\frac{4}{5}x + \frac{6}{5}$
28. $y = -\frac{x}{5}$
29. $y = \frac{5}{2}x - 22$
30. $y = \frac{7}{3}x + \frac{25}{3}$
31. $y = -\frac{x}{3} + \frac{2}{3}$
32. $y = -6x - 38$

33. The drama club sells 200 lb of fruit to raise money. The fruit is sold in 5-lb bags and 10-lb bags.
    a. Write an equation to find the number of each type of bag that the club should sell.
    b. Graph your equation.
    c. Use your graph to find two different combinations of types of bags.

34. The student council is sponsoring a carnival to raise money. Tickets cost $5 for adults and $3 for students. The student council wants to raise $450.
    a. Write an equation to find the number of each type of ticket they should sell.
    b. Graph your equation.
    c. Use your graph to find two different combinations of tickets sold.

35. Anna goes to a store to buy $70 worth of flour and sugar for her bakery. A bag of flour costs $5, and a bag of sugar costs $7.
    a. Write an equation to find the number of bags of each type Anna can buy.
    b. Graph your equation.

36. You have $50 to spend on cold cuts for a party. Ham costs $5.99/lb, and turkey costs $4.99/lb. Write an equation in standard form to relate the number of pounds of each kind of meat you could buy.