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

1. Slope: 3; y-intercept: 6 2) slope: ½; y-intercept: -5

Write an equation of the line that passes through the given point and has the given slope *m*.

3) (3, 8); *m* = 2 4) (-6, 3); *m =*

Write an equation of the line that passes through the given points.

5) (2, 4) and (5, 13) 6)

Graph the equation.

7) y – 3 = -3(x + 4) 8) y – 6 = (x – 3)

Write an equation in point-slope form of the line that passes through the given points.

9) (-4, 2) and (-2, 16) 10) (10, -2), (12, -6)

Write an equation in standard form of the line that passes through the given point and has the given slope *m* or that passes through the two given points.

11) (1, -2), (-2, 4)

Write an equation of the line that passes through the given point and is parallel to the given line.

12) (8, -3),

Write an equation of the line that passes through the given point and is perpendicular to the given line.

13) (15, -11),

Use your calculator to solve the following problems.

Make a scatter plot of the data in the table. Draw a line of fit. Write an equation of the line.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| X | 1 | 2 | 3 | 3.5 | 4 | 4.5 | 5 |
| Y | 20 | 35 | 40 | 55 | 60 | 45 | 60 |

14)

Make a scatter plot of the data. Find the equation of the best-fitting line. Approximate the value of y for x=7.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | 0 | 1 | 3 | 6 | 8 |
| Y | 5 | 8 | 12 | 15 | 14 |

15)

Chapter 6:

Graph the inequality.

16) x < 7 17) x > -3

Solve the inequality

18) y – 2 > 3 19) 4 > x – 3 20) 2 + n <

21) -8.5 < t – 10 22) -6.9 > -1.4 + y 23) 3x + 5 < 20

24) 8(m+2) < 4(5 + 2m) 25) 6d – 4 – 3d > 14 26)

27) 28) 2< y – 4 < 7

Solve the inequality and graph the solution.

29) -27 < 9x <27 30) 3r + 7 < -5 or 32 < 7r + 46

31) –n – 1> 1 or 2n + 8 > n + 8 32) 9t – 20 > 4t or 4 <

Solve the equation, if possible.

33) |x| = 8 34) |m + 6| = 5 36) 4|6s + 11| = -52

37) 38) 2|3s + 4| = 14

Solve the inequality.

39) |x| < 3 40) |x + 2| > 6 41) |3q + 2| - 3 > 8

42) 2|5a – 1| + 3 < 11 43)

Graph the inequality.

44) 3(x – 8) < 6y 45) y < 8

46) 2(x – 1) > 1 – y 47) 2(-x – 1) > 4 + y

49) 2x < -2y 50) 4x+ y > 3