

5.3 Notes

“Write Linear Equations in
Point-Slope Form”

$$y - y_1 = m(x - x_1)$$

5.2 Ans. Pgs. 296-298 (22 points)

4) $y = 2x - 9$

~~6) $y = 2x + 5$~~

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

10) The value of \$18 per month should have been substituted for m, not b.

$81 = 18(2) + b$

12) $y = 7x - 19$

~~14) $y = 2x + 12$~~

16) $y = -\frac{1}{2}x - \frac{7}{4}$

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

~~20) $y = \frac{7}{6}x + \frac{11}{6}$~~

22) $y = -3x - 7$

24) $y = -x - 4$

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

~~28) $y = 3x - 6$~~

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

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

34) (2 pts.) Yes + reason

36) (2 pts.) No + Reason

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

40) $y = \frac{3}{2}x + \frac{11}{2}$

50) (3 points) a) \$358

b) $y = 27.8x + 358$

c) \$886.20

52) (3 points) a) b = 17, 381

b) $y = 175x + 17, 381$

c) Number of US airports reached 19,200 in 2000.

48. a) \$295
 (2) b) \$25.95

Choose 1

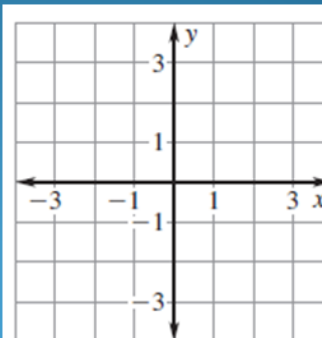
Example #1 → Write an equation in point-slope form of the line that passes through the given point and has the given slope.

a) $(-8, 2), m = 5$

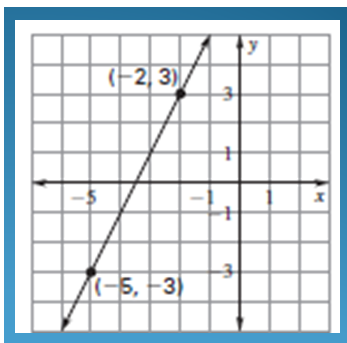
b) $(3, -4), m = 2/5$

Example #2 → Graph the equation.

$$y + 4 = -\frac{5}{2}(x - 3)$$



Example #3 → Write an equation of the line shown.



Example #4 → Write an equation in point-slope form for the line that passes through the given points.

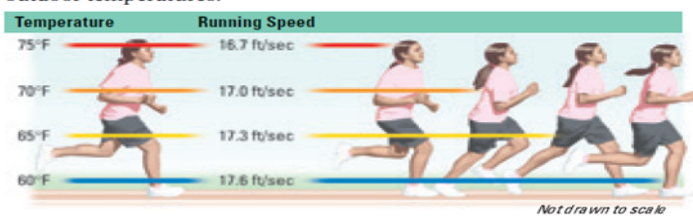
$(-4, -1)$ and $(6, -7)$

Example #5 → Tell whether the data in the table can be modeled by a linear equation. Explain. If possible, write an equation in point-slope form that relates x and y .

x	-2	-1	0	2	3
y	2.8	2.4	2	1.2	0.8

Example #6 → **Word Problem Practice**

43. **MARATHON** The diagram shows a marathon runner's speed at several outdoor temperatures.



- Write an equation in point-slope form that relates running speed (in feet per second) to temperature (in degrees Fahrenheit).
- Estimate the runner's speed when the temperature is 80°F.

HOMEWORK:

Pages 305-308
#'s 2-26 even - Skip #14
30, 32, 34, 40, 42