

Worksheet 5.5 - Point-Slope Form of a Linear Equation (textbook pages 300-306)

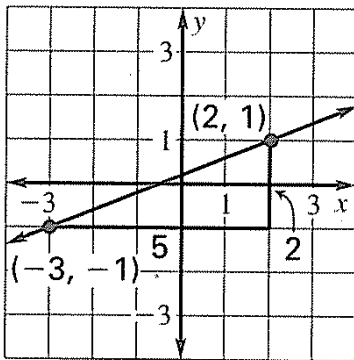
LEVEL 1

Find the slope of the line passing through the given points. Show your work.

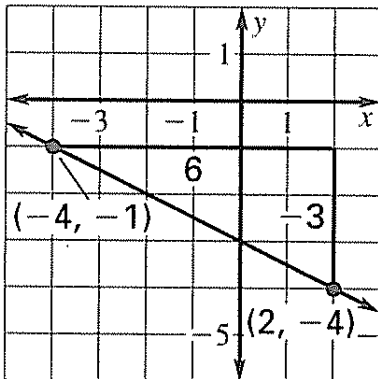
- 1) $(0, 5), (-2, 3)$ 2) $(7, -1), (-1, 3)$ 3) $(3, -2), (-5, -2)$

Write an equation in point-slope form of the line shown in the graph.

4) _____



5) _____



LEVEL 2

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

6) $(6, -5), m = -4$

7) $(0, -3), m = \frac{2}{3}$

8) $(-7, 6), m = 0$

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

9) $(-3, -8), (2, 4)$

10) $(6, -2), (10, 1)$

11) $(3, 0), (0, -3)$

LEVEL 3

Rewrite the equation in slope-intercept form. Show your work.

12) $y + 4 = 5(x + 2)$

13) $y + 11 = -3(x - 9)$

14) $y - \frac{2}{3} = 4(x + \frac{5}{12})$

15) $y - 5 = 3(x - 4)$

LEVEL 4

- 16) It costs \$1.50 per day to place a one-line ad in the classifieds plus a flat service fee. One day costs \$3.50 and four days costs \$8.00.
- Write a linear equation that gives the cost in dollars, y , in terms of the number of days the ad appears, x .
 - Find the cost of a six day ad.
- 17) You are driving from Grand Rapids, Michigan, to Detroit, Michigan. You leave Grand Rapids at 4:00 p.m. At 5:10 p.m., you pass through Lansing, Michigan, a distance of 65 miles.
- Write a linear equation that gives the distance in miles, d , in terms of time, t . Let t represent the number of minutes since 4:00 p.m.
 - Approximately what time will you arrive in Detroit if it is 150 miles from Grand Rapids?