

LESSON
4-7

Practice B

Point-Slope Form

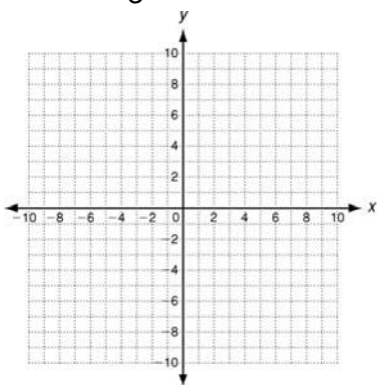
Write an equation in point-slope form for the line with the given slope that contains the given point.

1. slope = 3; (-4, 2)

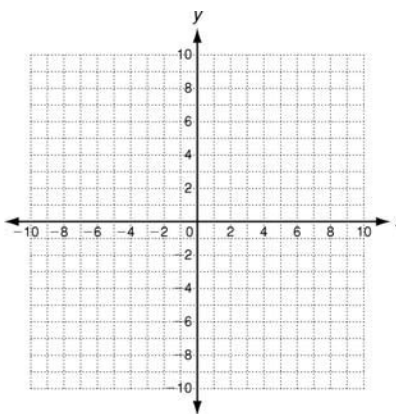
2. slope = -1; (6, -1)

Graph the line described by each equation.

3. $y + 2 = -\frac{2}{3}(x - 6)$



4. $y + 3 = -2(x - 4)$



Write the equation that describes the line in slope-intercept form.

5. slope = -4; (1, -3) is on the line

6. slope = $\frac{1}{2}$; (-8, -5) is on the line

7. (2, 1) and (0, -7) are on the line

8. (-6, -6) and (2, -2) are on the line

Find the intercepts of the line that contains each pair of points.

9. (-1, -4) and (6, 10) _____

10. (3, 4) and (-6, 16) _____

11. The cost of internet access at a cafe is a function of time.

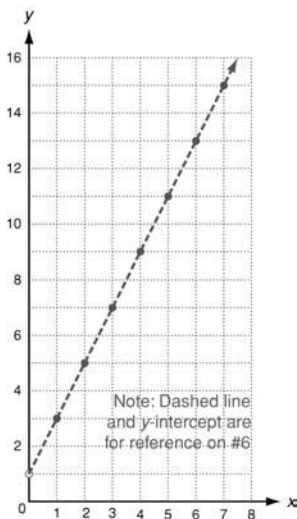
The costs for 8, 25, and 40 minutes are shown. Write an equation in slope-intercept form that represents the function. Then find the cost of surfing the web at the cafe for one hour.

Time (min)	8	25	40
Cost (\$)	4.36	7.25	9.80

4.

x	1	2	3	4	5	6	7
y	3	5	7	9	11	13	15

5.



No, because the domain of the sequence is restricted to natural numbers: $\{1, 2, 3, 4, \dots\}$.

6. $y = 2x + 1$

7. a. The slope is the same as the common difference ($m = d = 2$).

b. The y -intercept is the same as the first term less the common difference ($b = a_1 - d = 1$).

8. $y = -3x + 8$; $m = d = -3$ and $b = a_1 - d = 5 - (-3) = 8$

9. $a_n = 4 + (n - 1)(5)$; $d = m = 5$ and $a_1 = b + d = -1 + 5 = 4$

Problem Solving

1. $y = 10x + 300$

2. slope: 10, rate of the change of the cost: \$10 per student; y -int: 300, the initial fee (the cost for 0 students)

3. \$800

4. C

5. J

6. A

7. H

Reading Strategies

1. With a fraction, you have a “rise” and “run” for graphing.

2. $(0, -8)$

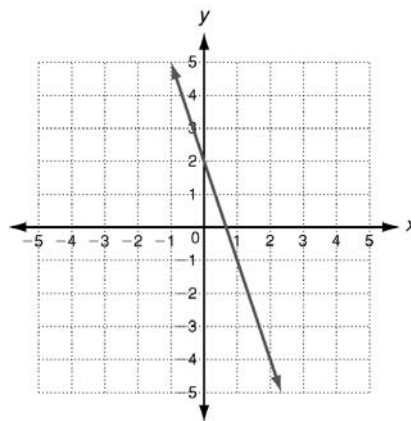
3. 5; 12

4. $-3; 0$

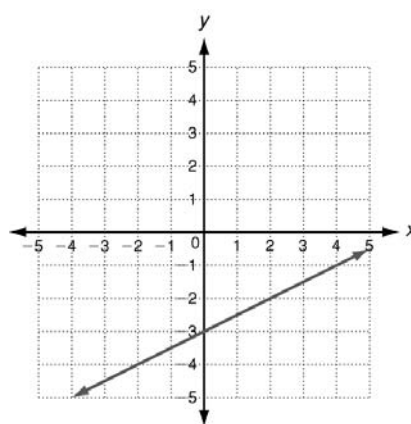
5. $1; -4$

6. $\frac{1}{3}; 3$

7.



8.



4-7 POINT-SLOPE FORM

Practice A

1. C

2. A

3. B

4. $y - 8 = 4(x - 3)$

5. $y + 3 = -\frac{1}{2}(x - 5)$

6. $y = 5x + 2$

7. $y = -3x + 12$

8. 2; $y = 2x + 2$

9. $\frac{1}{2}$; $y = \frac{1}{2}x - 6$

10. x -int: 4, y -int: 10

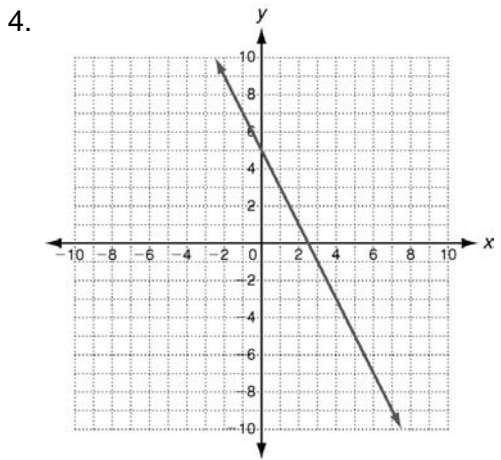
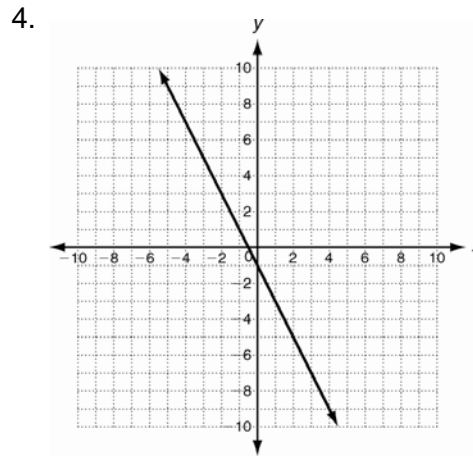
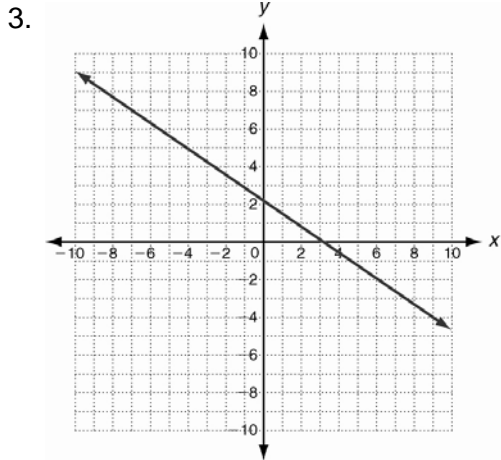
11. x -int: -1 , y -int: 3

12. $y = 8x + 30$; \$1070

Practice B

1. $y - 2 = 3(x + 4)$

2. $y + 1 = -(x - 6)$



5. $y = -4x + 7$ 6. $y = \frac{1}{4}x + \frac{7}{2}$
7. $y = -x + 3$ 8. $y = \frac{1}{3}x - 5$
9. x-int: 7, y-int: 6
10. x-int: 4, y-int: 10
11. $y = -26x + 5274$; 1374 gal

5. $y = -4x + 1$ 6. $y = \frac{1}{2}x - 1$
7. $y = 4x - 7$ 8. $y = \frac{1}{2}x - 3$
9. x-int: 1, y-int: -2 10. x-int: 6, y-int: 8
11. $y = 0.17x + 3$; \$13.20

Practice C

1. $y + 3 = \frac{4}{3}(x + 5)$ 2. $y - 8 = -3(x - 0)$ 2.

