Point-Slope Form (Practice Worksheet)

Write an equation in point-slope form of the line that passes through the given point and has the given slope.
1. (2, 7); m = -4
2. (12, 5); m = -3
3. (4, -5); m = 6
4. (-6, -2); m = 3
5. (7, -6); m = \(\frac{1}{2}\)
6. (-8, 2); m = \(-\frac{3}{4}\)

Graph the equations below.
7. \(y + 4 = -3(x + 2)\)
8. \(y + 3 = -2(x - 2)\)
9. \(y - 1 = 3(x + 6)\)
10. \(y + 4 = \frac{-5}{2}(x - 3)\)

Write an equation in point-slope form of the line graphed below. (Use the right hand point)

Write an equation in point-slope form of the line that passes through the two points given. Use the first point to write the equation.
11. (4, 7) and (5, 1)
12. (9, -2) and (-3, 2)
13. (3, -8) and 7(-2)
Point-Slope Form (Practice Worksheet) Answer Key!

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

1. (2, 7); \( m = -4 \)
   \[ y - 7 = -4(x - 2) \]

2. (12, 5); \( m = -3 \)
   \[ y - 5 = -3(x - 10) \]

3. (4, -5); \( m = 6 \)
   \[ y + 5 = 6(x - 4) \]

4. (-6, 2); \( m = 3 \)
   \[ y + 2 = 3(x + 6) \]

5. (7, -6); \( m = \frac{1}{2} \)
   \[ y + 6 = \frac{1}{2}(x - 7) \]

6. (-8, 2); \( m = -\frac{3}{4} \)
   \[ y - 2 = -\frac{3}{4}(x + 8) \]

Graph the equations below.

7. \( y + 4 = -3(x + 2) \)
   \((-2, -4); m = -3\)

8. \( y + 3 = -2(x - 2) \)
   \((2, -3); m = -2\)

9. \( y - 1 = 3(x + 6) \)
   \((-6, 1); m = 3\)

10. \( y + 4 = \frac{-5}{2}(x - 3) \)
    \((3, -4); m = \frac{-5}{2}\)

Write an equation in point-slope form of the line graphed below. (Use the right hand point)

11. \( y - 4 = -\frac{1}{4}(x - 3) \)

12. \( y - 1 = 3(x - 3) \)

13. \( y + 1 = 2(x - 1) \)

Write an equation in point-slope form of the line that passes through the two points given. Use the first point to write the equation.

14. (4, 7) and (5, 1)
   \[ y - 1 = -6(x - 5) \]

15. (9, -2) and (-3, 2)
   \[ y - 2 = \frac{-1}{3}(x + 3) \]

16. (3, -8) and 7(-2)
   \[ y + 8 = \frac{3}{2}(x + 4) \]