Point-Slope Form

Student Practice Worksheet

Name____________________________________________Date______________Grade___________

Find a Point-Slope equation for a line containing the given point and having the given slope.

1. (4, -3), m = -1
2. (-5, -6), m = 2

3. (-7, 2), m = 3
4. (3, 5), m = -2

5. (6, -2), m = -3
6. (5, -2), m = 2

7. (7, 0), m = 4
8. (0, 9), m = -2

9. (5, -1), m = $\frac{1}{5}$
10. (-3, -2), m = $\frac{1}{4}$
Give the Point-Slope form of the equation that passes through the given points.

11. (0, 8) and (-1, 10)  
12. (-6, 8) and (4, 8)

13. (4, 5) and (-3, 8)  
14. (0, 9) and (2, 0)

15. (-1, 7), (8, -2)  
16. (4, 0), (0, 5)

17. (5, 7), (-1, 3)  
18. (0, 0), (-4, 3)

19. (-3, -5), (3, -15)  
20. \((-\frac{1}{2}, \frac{1}{2}), (\frac{1}{4}, \frac{3}{4})\)
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Answer Key

Name______________________________________________ Date______________ Grade__________

Find a Point-Slope equation for a line containing the given point and having the given slope.

1. (4, -3), m = -1
   
   \[ y + 3 = -1(x - 4) \]

2. (-5, -6), m = 2
   
   \[ y + 6 = 2(x + 5) \]

3. (-7, 2), m = 3
   
   \[ y - 2 = 3(x + 7) \]

4. (3, 5), m = -2
   
   \[ y - 5 = -2(x - 3) \]

5. (6, -2), m = -3
   
   \[ y + 2 = -3(x - 6) \]

6. (5, -2), m = 2
   
   \[ y + 2 = 2(x - 5) \]

7. (7, 0), m = 4
   
   \[ y - 0 = 4(x - 7) \] or \[ y = 4(x - 7) \]

8. (0, 9), m = -2
   
   \[ y - 9 = -2(x - 0) \] or \[ y - 9 = -2x \]

9. (5, -1), m = \( \frac{1}{5} \)
   
   \[ y + 1 = \frac{1}{5}(x - 5) \]

10. (-3, -2), m = \( \frac{1}{4} \)
    
    \[ y + 2 = \frac{1}{4}(x + 3) \]
Give the Point-Slope form of the equation that passes through the given points.

11. (0, 8) and (-1, 10)  
   \[ y - 8 = -2(x - 0) \text{ or } y - 8 = -2x \]

12. (-6, 8) and (4, 8)  
   \[ y - 8 = 0(x + 6) \text{ or } y = 8 \]

13. (4, 5) and (-3, 8)  
   \[ y - 5 = -\frac{3}{7}(x - 4) \]

14. (0, 9) and (2, 0)  
   \[ y - 9 = \frac{9}{2}(x - 0) \text{ or } y - 9 = \frac{9}{2}x \]

15. (-1, 7), (8, -2)  
   \[ y - 7 = -(x + 1) \]

16. (4, 0), (0, 5)  
   \[ y - 0 = -\frac{5}{4}(x - 4) \text{ or } y = -\frac{5}{4}(x - 4) \]

17. (5, 7), (-1, 3)  
   \[ y - 7 = \frac{2}{3}(x - 5) \]

18. (0, 0), (-4, 3)  
   \[ y - 0 = -\frac{3}{4}(x - 0) \text{ or } y = -\frac{3}{4}x \]

19. (-3, -5), (3, -15)  
   \[ y + 5 = -\frac{5}{3}(x + 3) \]

20. \((-\frac{1}{2}, -\frac{1}{2}), (\frac{1}{4}, \frac{3}{4})\)  
   \[ y - \frac{1}{2} = \frac{1}{3}(x + \frac{1}{2}) \]