

Name _____

Point-Slope Form Worksheet

Find the equation of the line with the given slope that passes through the given point. Write the equation of the line in point-slope form.

1. $m = 6$ and $(2, 5)$

2. $m = -7$ and $(1, -1)$

3. $m = -2$ and $(-5, -2)$

4. $m = 2$ and $(-1, -3)$

5. $m = 3$ and $(0, 10)$

6. $m = -9$ and $(8, 9)$

Find the equation of the line that passes through the given points. Write the equation in point-slope form.

7. $(-1, 3)$ and $(-2, 5)$

8. $(-7, 7)$ and $(5, -6)$

9. $(1, 12)$ and $(-3, 5)$

10. $(1, 9)$ and $(-2, -2)$

Write each point-slope equation in slope-intercept ($y = mx + b$) form.

11. $y + 2 = 4(x + 5)$

12. $y - 1 = -2(x - 9)$

13. $y - 5 = 6(x - 8)$

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

Write the point-slope equation in standard form.

15. $y - 6 = 2(x + 7)$

Point-Slope Form Worksheet Answers

Find the equation of the line with the given slope that passes through the given point. Write the equation of the line in point-slope form.

1. $m = 6$ and $(2, 5)$ $y - 5 = 6(x - 2)$

2. $m = -7$ and $(1, -1)$ $y + 1 = -7(x - 1)$

3. $m = -2$ and $(-5, -2)$ $y + 2 = -2(x + 5)$

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

5. $m = 3$ and $(0, 10)$ $y - 10 = 3(x - 0)$

6. $m = -9$ and $(8, 9)$ $y - 9 = -9(x - 8)$

Find the equation of the line that passes through the given points. Write the equation in point-slope form.

7. $(-1, 3)$ and $(-2, 5)$ $y - 3 = -2(x + 1)$ or $y - 5 = -2(x + 2)$

8. $(-7, 7)$ and $(5, -6)$ $y - 7 = -\frac{13}{12}(x + 7)$ or $y + 6 = -\frac{13}{12}(x - 5)$

9. $(1, 12)$ and $(-3, 5)$ $y - 12 = \frac{7}{4}(x - 1)$ or $y - 5 = \frac{7}{4}(x + 3)$

10. $(1, 9)$ and $(-2, -2)$ $y - 9 = \frac{11}{3}(x - 1)$ or $y + 2 = \frac{11}{3}(x + 2)$

Write each point-slope equation in slope-intercept ($y = mx + b$) form.

11. $y + 2 = 4(x + 5)$ $y = 4x + 18$

12. $y - 1 = -2(x - 9)$ $y = -2x + 19$

13. $y - 5 = 6(x - 8)$ $y = 6x - 43$

14. $y + 3 = \frac{3}{2}(x - 4)$ $y = \frac{3}{2}x - 9$

Write the point-slope equation in standard form.

15. $y - 6 = 2(x + 7)$ $-2x + y = 20$ or $2x - y = -20$