

Name _____

Date _____ Pd. _____

Notes: Writing Equations in Point-Slope Form

Point-Slope Form	
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Example 1 Write the point-slope form of an equation for a line that passes through (6, 1) and has a slope of $-\frac{5}{2}$.

Example 2 Write the point-slope form of an equation for a horizontal line that passes through (4, -1).

Slope-Intercept Form		$m = \text{slope}; b = y\text{-intercept}$
Point-Slope Form		$m = \text{slope}; (x_1, y_1)$ is a given point.
Standard Form		A and B are not both zero. Usually A is nonnegative and $A, B,$ and C are integers whose greatest common factor is 1.

Example 1 Write $y + 5 = \frac{2}{3}(x - 6)$ in standard form.

Example 2 Write $y - 2 = -\frac{1}{4}(x - 8)$ in slope-intercept form.

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Exit Card: Writing Equations in Point-Slope Form

A line passes through the point (3,-5) and has slope 7. Which of the following is the correct point-slope form of the equation of the line?

F. $y + 5 = 7(x - 3)$

G. $y - 5 = 7(x + 3)$

H. $y + 5 = 7(x + 3)$

J. $y - 5 = 7(x - 3)$

An online service charges a flat fee per month for no use, then a fee for each hour
The chart below shows how much Lisa was charged for the first two months of the year.

<i>Month</i>	<i>Hours</i>	<i>Charge</i>
<i>January</i>	6	\$44
<i>February</i>	9	\$56

How much will she pay if she uses the service for 25 hours?

	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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Homework: Pages 289 – 290 (15, 18, 25, 28 (in slope-intercept form), 36, 48)

15. Write an equation of the line that passes through (3, 8) and $m = 2$.

18. Write an equation of the line that passes through (-6, 1) and $m = -4$.

25. Write an equation of the line that passes through (-4, 8) and $m = \frac{7}{2}$.

28. A horizontal line passes through (0, 7). Write the point-slope form of its equation.

36. Write the equation $y + 4 = -\frac{1}{3}(x - 12)$ in standard form.

48. Write the equation $y - 5 = -\frac{2}{5}(x + 15)$ in slope-intercept form.