

# Homework: Point-Slope Form

Date: Sept. 13

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Don't forget to sign up for remind and check out my website: [www.nhotsoubanh.weebly.com](http://www.nhotsoubanh.weebly.com)

Mini Quiz 1 is on Friday, Sept. 14

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

Point-slope form:  $y - y_1 = m(x - x_2)$

1. $(2, 7); m = -4$ $y - 7 = -4(x - 2)$	2. $(-6, -2); m = 3$ $y + 2 = 3(x + 6)$
3. $(-8, 2); m = -\frac{3}{4}$ $y - 2 = -\frac{3}{4}(x + 8)$	4. $(7, -6); m = \frac{1}{2}$ $y + 6 = \frac{1}{2}(x - 7)$

5. Write an equation in point-slope form of the line that passes through the two points,  $(9, -2)$  and  $(-3, 2)$ . Use the first point to write the equation.

$x$	$y$	$\Delta y$
9	-2	+4
-3	2	
$\Delta x$		
-12		

$$y + 2 = -\frac{1}{3}(x - 9)$$

$$m = \frac{\Delta y}{\Delta x} = \frac{4}{-12}$$

simplify

$$m = -\frac{1}{3}$$

\* I used the table to find the slope  $(\frac{\Delta y}{\Delta x})$ .

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

$$m = -\frac{1}{4}$$

from graph

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

