

5.3 Practice B (point-slope to slope-intercept eq) Date _____ Period _____

Write the **slope-intercept form** of the equation of the line through the given point with the given slope.

1) through: $(-5, -2)$, slope $= -\frac{3}{5}$

P/s $y + 2 = -\frac{3}{5}(x + 5)$

$y + 2 = -\frac{3}{5}x - 3$
 -2 -2

S/I $y = -\frac{3}{5}x - 5$

3) through: $(4, -2)$, slope $= -\frac{7}{4}$

$y + 2 = -\frac{7}{4}(x - 4)$

$y + 2 = -\frac{7}{4}x + 7$
 -2 -2

$y = -\frac{7}{4}x + 5$

2) through: $(5, 3)$, slope $= -\frac{1}{5}$

$y - 3 = -\frac{1}{5}(x - 5)$

$y - 3 = -\frac{1}{5}x + 1$
 $+3$ $+3$

$y = -\frac{1}{5}x + 4$

Write the **slope-intercept form** of the equation of the line through the given points.

4) through: $(-4, 2)$ and $(-2, -1)$

$m = \frac{2 + 1}{-4 + 2} = -\frac{3}{2}$ $M = -\frac{3}{2}$

FIND M
 PICK A PT

P/s $y - 2 = -\frac{3}{2}(x + 4)$

$y - 2 = -\frac{3}{2}x - 6$
 $+2$ $+2$

S/I $y = -\frac{3}{2}x - 4$

5) through: $(-2, -3)$ and $(-4, 1)$

$m = \frac{-3 - 1}{-2 - 4} = \frac{-4}{-2} = 2$ $M = 2$

P/s $y + 3 = 2(x + 2)$

$y + 3 = 2x + 4$
 -3 -3

$y = 2x + 1$

*6) through: $(0, -3)$ and $(3, -1)$

* Can you think of a shortcut?

$m = \frac{-3 + 1}{0 - 3} = \frac{-2}{-3} = \frac{2}{3}$ $M = \frac{2}{3}$

$b = -3$ $(0, -3)$

$y = \frac{2}{3}x - 3$