Algebra 1 | 5.3+5.4 handouts | Name_____ ID: 1

5.3 Practice A (introduction point-slope equation)

Date_____ Period____

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

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

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

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

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

3) through: $(-5, 2)$, slope $= -\frac{3}{4}$

$y - 2 = \frac{-3}{4}(x + 5)$

From the point slope equation identify the slope (m=) and point (_ , _).

4) $y + 3 = \frac{7}{2}(x + 2)$ (y_1, m, x_1)

$m = \frac{7}{2}$ $p + (-2, -3)$

5) $y - 2 = -\frac{2}{5}(x - 5)$

$m = \frac{-2}{5}$ $p + (5, 2)$

6) $y + 3 = -\frac{4}{5}(x - 5)$

$m = \frac{-4}{5}$ $p + (5, -3)$

Write the point-slope form of the equation of the line through the given points (use 1st point for your point-slope equation).

$m = \frac{\Delta y}{\Delta x}$

7) through: $(5, 2)$ and $(-2, 4)$

$m = \frac{4-2}{-2-5} = \frac{2}{-7}$

$m = -\frac{2}{7}$

P/s $y - 2 = \frac{-2}{7}(x - 5)$

8) through: $(3, -2)$ and $(0, 2)$

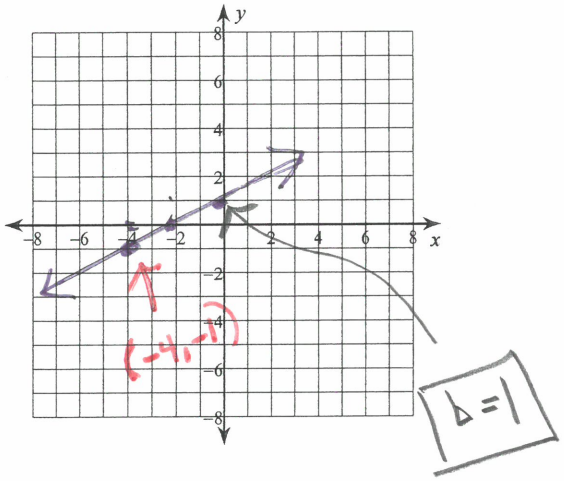
$m = \frac{2+2}{0-3} = \frac{4}{-3}$ $m = -\frac{4}{3}$

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

Use the point-slope equation to graph the line; then look at the graph to write the slope-intercept equation AND state the slope and yintercept (with the correct variable names)

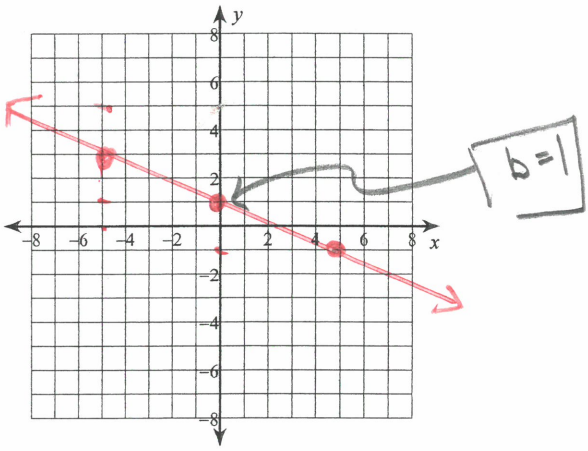
9) $y+1=\frac{1}{2}(x+4)$ $m=\frac{1}{2}$ $pt(-4,-1)$

11)



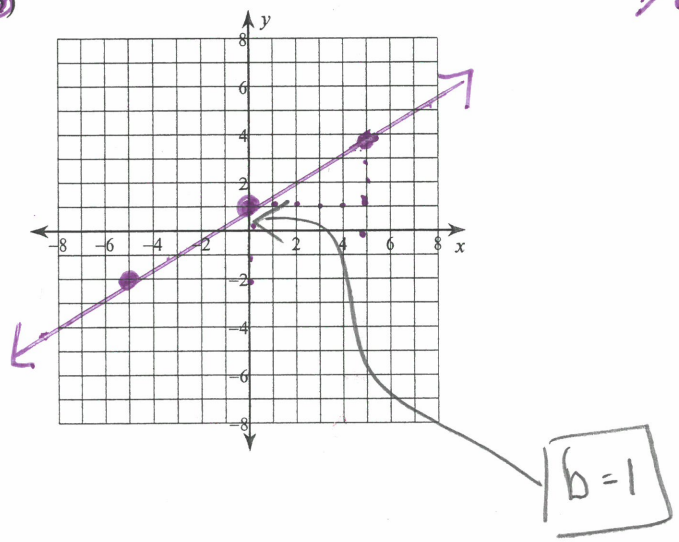
10) $y-3=-\frac{2}{5}(x+5)$ $m=\frac{-2}{5}$ $pt(-5,3)$

12)



13) $y-4=\frac{3}{5}(x-5)$ $m=\frac{3}{5}$ $pt(5,4)$

15)



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

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