Name: ___KEY_____

Point-Slope Form Homework

1. Write an equation in point-slope form for the line with the given information.

(A) slope of 2; (3, 4)   (B) slope of -2; (-3, 4)

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

(C) slope of 3; (2, 6)   (D) slope of 1/5; (-4, -2)

$y - 6 = 3(x - 2)$ $y + 2 = \left(\dfrac{1}{5}\right)(x + 4)$

(E) (5, -2) and (-2, 5)   (F) (-3, 3) and (-4, 4)

$m = \dfrac{y_2 - y_1}{x_2 - x_1} = \dfrac{5 + 2}{-2 + 5} = \dfrac{7}{-7} = -1$ $m = \dfrac{y_2 - y_1}{x_2 - x_1} = \dfrac{4 - 3}{-4 + 3} = \dfrac{1}{-1} = -1$

$y + 2 = -(x - 5)\, or\, y - 5 = -(x + 2)$ $y - 3 = -(x + 3)\, or\, y - 4 = -(x + 4)$

2. Graph the following equations on the given coordinate plane.

(A) $y - 5 = 3(x - 2)$ (B) $y + 2 = 2(x - 4)$

(C) $y - 1 = 4(x + 3)$

(D) $y + 8 = \dfrac{1}{2}(x + 3)$

| (C) $y - 1 = 4(x + 3)$ | y-axis |
| (B) $y + 2 = 2(x - 4)$ |
| x-axis |
| (D) $y + 8 = \frac{1}{2}(x + 3)$ |
| (A) $y - 5 = 3(x - 2)$ |