

Name: \_\_\_\_\_

Review

Equations of Lines -

1. Determine the equation of a line parallel to  $3y = 6x - 2$  and passing through  $(-2, 8)$ . Please state your answer in **General Form**.

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

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

$$m = 2$$

$$(x_1, y_1)$$

$$(-2, 8)$$

$$y - y_1 = m(x - x_1)$$

$$y - 8 = 2(x + 2)$$

$$y - 8 = 2x + 4$$

$$0 = 2x - y + 4 + 8$$

$$0 = 2x - y + 12$$

$$(4, 0)$$

2. Determine the equation of a line perpendicular to  $3 - 2y = 8x + 5$  and having an x-intercept of 4. Please state your answer in **General Form**.

$$3 - 2y = 8x + 5 - 3$$

$$-2y = 8x + 2$$

$$\frac{-2y}{-2} = \frac{8x + 2}{-2}$$

$$y = -4x - 1$$

$$\frac{1}{4}$$

$$y - y_1 = m(x - x_1)$$

$$y - 0 = \frac{1}{4}(x - 4)$$

$$4y = 1(x - 4)$$

$$4y = 1x - 4$$

$$0 = 1x - 4y - 4$$

3. Determine the equation of a line passing through the points  $(-2, 1)$  and  $(6, -3)$ .  
Please state your answer in **Slope-Point Form**.

$$m = \frac{1}{2}$$

$$(x_1, y_1)$$

$$y - y_1 = m(x - x_1)$$

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

$$y - y_1 = m(x - x_1)$$

$$y + 3 = \frac{1}{2}(x - 6)$$

$$\frac{-3 - 1}{6 - (-2)}$$

$$-\frac{4}{8}$$

$$= -\frac{1}{2}$$

4. Determine the equation of a **horizontal** line passing through  $(4, 2)$ .  
Please state your answer in **General Form**.

$$m = 0$$

$$y - y_1 = m(x - x_1)$$

$$y - 2 = 0(x - 4)$$

$$y - 2 = 0$$

$$y - 2 = 0$$

5. Determine the equation of a line with a slope parallel to  $2(y - 3) = 8x - 12$  and a y-intercept of 4. Please state your answer in Slope- Intercept Form.

$$2(y - 3) = 8x - 12$$

$$2y - 6 = 8x - 12$$

$$2y = 8x - 12 + 6$$

$$\frac{2y}{2} = \frac{8x}{2} - \frac{6}{2}$$

$$y = 4x - 3$$

$$y = mx + b$$

$$m = 4$$

$$y\text{-int}(b) = 4$$

$$y = 4x + 4$$