

Name: KEY Hour: \_\_\_\_\_ Date: \_\_\_\_\_

## NOTES: Chapter 5 Review

Goals: #1 - I can write linear equations in slope-intercept form. 😎

#2 - I can use linear equations in slope-intercept form. 😐

#3 - I can write linear equations in point-slope form. 😞

#4 - I can write linear equations in standard form.

#5 - I can write equations of parallel and perpendicular lines.

Notes:

There are 3 different forms we can write linear functions in:

- Slope-Intercept Form:  $y = mx + b$   
Examples:  $y = 2x - 5$       slope  $\swarrow$        $\searrow$  y-int  
This is useful when we are given the slope and the y-int of the line.

- Point-Slope Form:  $y - y_1 = m(x - x_1)$   
Examples:  $y - 3 = \frac{1}{2}(x + 2)$        $\swarrow$  slope       $(x_1, y_1)$   $\searrow$  point  
This is useful when we are given the slope and a point of the line.

- Standard Form:  $Ax + By = C$   
Examples:  $3x + 5y = 7$

Two lines can be parallel, perpendicular or neither.

- Parallel Lines have the same slope.

Examples:  $\updownarrow \updownarrow$        $y = 2x - 5$        $y = 2x + 1$

- Perpendicular Lines have opposite reciprocal slopes.

Examples:  $\leftrightarrow \updownarrow$        $y = 2x - 5$        $y = -\frac{1}{2}x + 1$