

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

Complete as many of the following problems as you can with your table. If your entire table finishes early, you may leave early or work on homework.

- (1) Find the slope of the line passing through the points below, or state that the slope is undefined. Indicate whether the line through the points rises, falls, is horizontal, or is vertical.

(a)  $(5, 3)$  and  $(6, 8)$

(c)  $(5, 7)$  and  $(6, 9)$

(b)  $(-5, 1)$  and  $(5, 5)$

(d)  $(-1, 2)$  and  $(5, 6)$

- (2) Find the slope and y-intercept of the graph and use it to graph the following functions:

(a)  $f(x) = -3x$

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

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

(3) Find the  $x$  and  $y$  intercepts and then use them to graph the following:

(a)  $5x = 10y - 20$

(c)  $3x - 4y = -12$

(b)  $-6x + 4y = 0$

(d)  $f(x) = -\frac{2}{3}x + 2$

(4) Rewrite the given equation in slope-intercept form, and then graph the function.

(a)  $6x - 3y - 12 = 0$

(b)  $9x - 3y - 9 = 0$

- (5) Write the slope intercept form of the equation that satisfies the given conditions:
- (a) Slope is 3, passing through  $(3, 5)$
  - (b) Slope is  $-2$  passing through  $(-3, -6)$
  - (c) Passing through  $(-6, 0)$  and  $(0, 6)$
  - (d) Passing through  $(-3, 1)$  and  $(6, -2)$
- 
- (6) Write the point-slope form of the equation satisfying the given conditions. Then use the point-slope form of the equation to write the slope intercept form of the equation.
- (a) Parallel to  $y = 4x$  and passing through  $(4, 1)$
  - (b) Perpendicular to  $y = 4x$  and passing through  $(1, 4)$
  - (c) Passing through  $(-8, 8)$  and perpendicular to the line that has an  $x$ -intercept of  $(3, 0)$  and a  $y$ -intercept of  $(0, -6)$ .