Name: Date:

Advanced Algebra

1-2 Writing Linear Equations

TWO FORMS OF A LINAER EQUATION

**Slope-Intercept Form Point- Slope Form**

**Example 1:** Find the equation of a line that passes through the points .

**Example 2:** Find the equation of the line that passes through the point and has a slope of -2.

**Practice:**

1) Find the equation of the line that has as slope of and passes through the point (-2, 6).

2) Find the equation of a line that passes through the points .

MORE ON PARALLEL AND PERPENDICULAR

\*\*Two distinct non-vertical lines are **parallel** if and only if their slopes are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

That is, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\*\*Two non-vertical lines are **perpendicular** if and only if their slopes are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of each other.

That is, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

**Example 3:** Find an equation of a line that passes through the point (2, -1) and is:

a. parallel to b. perpendicular to

**Example 4:** Find an equation of a line that passes through the point (3, 5) and is:

a. parallel to b. perpendicular to

**Practice:**

1) Find the equation of a line that passes through the point (-3, 2) and is parallel to the line

2) Find an equation of the line that passes through the point and has a slope of .

3) Find the equation of a line that passes through the point and is perpendicular to the line .

4) Determine if the lines L1 and L2 passing through the pair of points below are parallel, perpendicular, or neither.

5) Write an equation of a line that passes through the point (2, 5) and is parallel to .