**Finding the slope-intercept equation of a line when we know a point and that it is parallel or perpendicular:**

1. Determine the slope of your new line

\_\_\_\_\_\_\_\_\_\_\_ if parallel

\_\_\_\_\_\_\_\_\_\_\_ if perpendicular

1. Plug the (x, y) point and the slope into y = mx + b.
2. Solve for b, the y-intercept.
3. Write the final equation of the line.

**Example 1.** Find the slope-intercept equation of the line through the point (-2, 5) and **parallel** to the line 

**Example 2.** Find the slope-intercept equation of the line through the point (-8, 3) **perpendicular** to the line 

**Practice:**

1. Find the equation of the line parallel to the line through the point (-2, 4)
2. Find the equation of the line perpendicular to the line through the point (-6, 8)
3. Find the equation of the line parallel to the line and through the point (7, -2)
4. Find the equation of the line perpendicular to the line and through the point (8, 5)