

## Section 4.4a: Finding the Equation of a Line

### Objectives

- Graph a line given its slope and one point on the line.
- Find the equation of a line given its slope and one point on the line using the formula:  
$$y - y_1 = m(x - x_1).$$
- Find the equation of a line given two points on the line.

### Instruct

1. The *SLOPE-INTERCEPT FORM* of the equation of a line is: \_\_\_\_\_  
where  $m$  is the slope and  $(0, b)$  is the  $y$ -intercept.
2. The *STANDARD FORM* of the equation of a line is: \_\_\_\_\_.
3. The *POINT-SLOPE FORM* of the equation of a line is: \_\_\_\_\_ where  
 $m$  is the slope and  $(x_1, y_1)$  is a given point on the line.
4. The point-slope form, the slope-intercept form, and the standard form are NOT equivalent ways to write the equation of a line. **True/ False**
5. What two pieces of information are needed to write an equation of a line in Point-Slope form?

6. Sketch the graph of a line with slope  $m = \frac{3}{2}$   
and passes through the point  $(2, 1)$ . (Hint: slide 3)

