

VCU Math 151—Worksheet 2.1

Name: _____

1. Find a point-slope form of the line with the given slope which passes through the given point:
 $m = 3, P(3, -1)$
2. Find the slope-intercept form of the equation of the line in (1).
3. Find the slope of the line which passes through the given points: $P(3, -5), Q(7, 4)$.
4. Find a point-slope form of the line which passes through the points from (3).
5. Graph the function: $f(x) = 2x - 1$. Find the slope, y -intercept and x -intercept.

6. The US Unemployment Rate was 5.0% in January 2008 and 7.7% in January 2009.¹

(a) Find a linear function which fits these data using the number of years since January 2008, t , as the independent variable and the unemployment rate, U , as the dependent variable.

(b) Use this model to predict the unemployment rate in January 2010.

NOTE: The actual unemployment rate was 9.7%.

7. Compute the average rate of change of the function over the specified interval:

$$f(x) = \sqrt{x}, [9, 16]$$

¹Source: <http://www.bls.gov/cps/>