

Name _____

Date _____

Hr _____

Alg II

Unit 2 Review—DAY TWO

1. Write an equation in slope-int form for the line that satisfies each set of conditions.

a. slope = -5, y-int = 2

b. slope = $\frac{3}{4}$, passes through (-6,9)

c. slope = $\frac{2}{3}$, passes through (4,5)

d. passes though (3,-8) and (-3,2)

e. passes through (-1,2), parallel to $y = 5x+4$

f. passes through (3,2), and perpendicular to $y = -\frac{3}{5}$

2. The table below shows the median weekly earnings for American workers for the period 1985 – 1999.

Year	1985	1990	1995	1999	2010
Earnings (\$)	343	412	479	549	?

Source: U.S. Bureau of Labor Statistics

Use your graphing calculator and answer the following questions.

a. What type of correlation is there for years and \$ earned? _____

b. What is the linear regression (line of best fit equation) for the data? _____

c. Based on your equation in b. predict the weekly earnings for 2010. _____

3. The following table shows the number of people below the poverty level for the period of 1980 – 1998.

Year	People (millions)
1980	29.3
1985	33.1
1990	33.6
1995	36.4
1998	34.5

Use your graphing calculator and answer the following questions.

a. What type of correlation is there? _____

b. What is the linear regression (line of best fit equation) for the data? _____

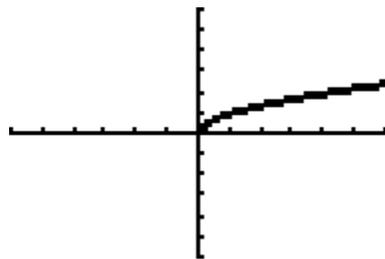
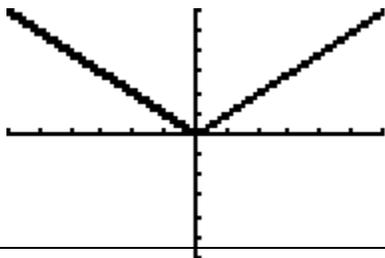
c. Based on your equation in b. predict the number of people below the poverty line in 2015. _____

4. Describe the transformation of each that will happen compared to it's parent graph, and then sketch the graph.

a. $y = |x + 2| - 3$

b. $y = \sqrt{x} - 4$

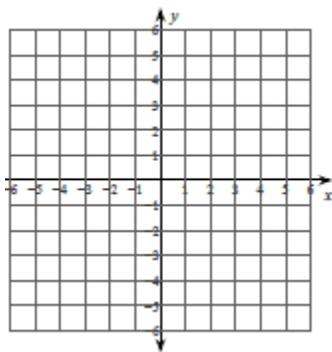
c. $y = (x - 4)^3 + 2$



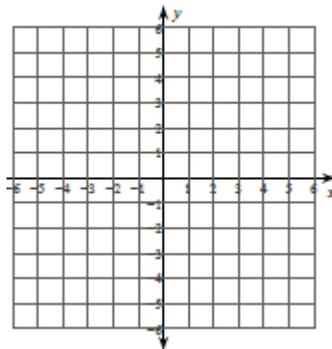
5. Parent Graph $y = x^2$		
Description	Equation	Check with calculator. Correct?
<ul style="list-style-type: none"> • 5 right • 3 up • Wider 		
<ul style="list-style-type: none"> • Upside down • 2 down • 4 left 		

6. Graph the following inequalities.

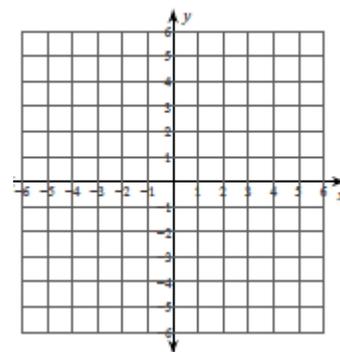
a. $y \geq -3x + 4$



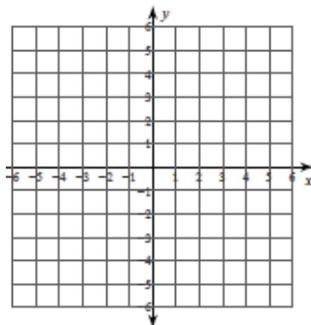
b. $y \leq \frac{4}{3}x - 4$



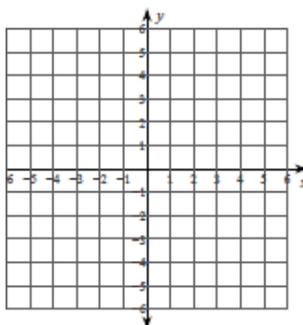
c. $x < -5$



d. $3x - 2y < 10$



e. $y \geq 4$



7. Kelly's Video Store sells pre-owned DVD's and CD's. DVD's are \$7 each, and CD's are \$6 each. You have \$28 to spend.

a. Write an inequality that represents this situation

b.) Do you have enough to buy 2 DVD's and 2 CD's?