

Name: _____
Date: _____
Class: _____

Algebra
Review
Graded Homework 30

Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.
NO WORK = ZERO CREDIT

1) [3] Line m passes through points (1, -5) and (4, -10). Line n is parallel to line m and passes through (2, 8). Find the equation of line n

2) [4] You purchase a home for \$175,000 in 2010. The equation $y = 175000(.9872)^x$ can be used to find the value of the house where x is the number of years that have occurred since 2010. How much would the house be worth on January 1st, 2017?
Explain what is happening to the value of this house each year.

3) [4] Use the following table (which represent the humidity (y) and temperature (x) over a few random days) to find the equation of the line of best fit and create a residual plot. What does this residual plot tell you about your line of best fit equation?

x	45	72	57	80	52	58	67	48	70
y	32	54	50	62	44	45	60	20	68

4) [3] If $A = 2x^2 - 8$ and $B = 3x^3 - 4x - 9$ express $A - B$ in standard form.

5) [3] Graph and show the solution set for the following system of inequalities:
 $x + y > 9$ and $2x - y \geq 5$

6) [4] Do these two equations have the same roots? Explain.

$$y = 6x^2 - 4x + 10 \text{ and } y = \left(x - \frac{1}{3}\right)^2 + \frac{14}{9}?$$

7) [3] Express in simplest radical form: $\sqrt{432} - 7\sqrt{147} + (\sqrt{75})(\sqrt{1728})$

8) [3] You have an average of 75.5 on your 6 English tests this semester. You have 5 of those tests and received a 72, 81, 86, 46, and 90 on the these tests. What would the median of your 6 tests be?

9) [3] Solve the equation for y: $\frac{1}{2}xyz + 10d = 19$