

Name: _____
Date: _____
Class: _____

Algebra
Review
Graded Homework 25

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] Using the following recursive function, find the average rate of change between the 3rd and 5th term. $f(1) = 1$ and $f(n + 1) = 3 * (f(n))^2$

2) [3] Graph the following piecewise function: $f(x) = \begin{cases} x^2 + 5x + 1, & x < -1 \\ -|x + 1| + 3, & x \geq -1 \end{cases}$

3) [4] Place the following function into vertex form: $g(x) = 3x^2 - 7x + 8$

4) [3] Solve (answers to the nearest tenth): $9x^2 - 8x + 17 = 7x^2 + 3x + 21$

5) [3] Find the solution to the system of inequalities:

$$t(x) > 3x - 4 \text{ and } y(x) \leq -\frac{1}{2}x + 6$$

6) [3] Find the standard deviation for the following set of data:
6, 10, 5, 2, 10, 18, 5, 8, 19, 10, 1, 4, 9, 10, 25

7) [3] Solve the following equation for s: $6y(10s - 14t) = 3y$

8) [2] Is (3, 6) a solution to the function $b(x) = 9x^2 - 14x - 45$

9) [3] Solve and graph on a number line: $10x - 9(3x + 14) > 8 - (9 - x)$