

Name: _____
Date: _____
Class: _____

Algebra
Review
Graded Homework 22

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] Express in simplest radical form: $\sqrt{12096a^4bc^7}$

2) [3] Find the solution of the system: $g(x) = |x + 3| + 2$ and $f(x) = \frac{1}{3}x + \frac{5}{3}$

3) [3] Find the average rate of change for the function between $x = 1$ and $x = 4$ using $t(x) = \sqrt{4x}$.

4) [4] The height of a diver after t seconds can be modeled by the function $h(t) = t^2 + 4t + 2$. Explain what would be an appropriate domain and range for this function based on the fact that it is reference to a diver and their height in relationship to the surface of the water.

5) [4] Two people are buying fruit at the farmers' market (Apples, Oranges, and Pears). Apples cost \$2.50 per pound, Oranges cost \$1.75 per pound, and Pears cost \$1.25 per pound. Person A buys 2 pounds of pears, some oranges, and some apples and spends \$22.25. Person B buys 3 pounds of pears, some oranges, and some apples and spends \$17.25. What was the total pounds of oranges purchased by these two people combined?

6) [3] Simplify: $6(2x - 6) - (8x - 7) + 3x - 9(17 - 8x)$

7) If $4x^2 - 100 = 0$, the roots of the equation are

(1) -25 and 25

(3) -5 and 5

(2) -25 , only

(4) -5 , only

8) Which expression is equivalent to $x^4 - 12x^2 + 36$?

(1) $(x^2 - 6)(x^2 - 6)$

(3) $(6 - x^2)(6 + x^2)$

(2) $(x^2 + 6)(x^2 + 6)$

(4) $(x^2 + 6)(x^2 - 6)$