

Name _____
Date _____

Advanced Algebra
Unit 2: Families of Functions
Homework #9

1. Given $f(x) = 3x+2$ and $g(x) = (x-1)^2$
 - a. $f(g(2))$ _____
 - b. $f(g(x))$ _____
 - c. $g(f(2))$ _____
 - d. $g(f(x))$ _____

2. What is the domain and range for $y = (x-2)^2 + 3$
 - a. Domain _____
 - b. Range _____
 - c. Does this have a maxima or a minima? _____

3. Given $f(x) = 4x-5$ find $f(5)$ _____

4. Given a piece of paper that is 20 inches by 50 inches. You will be making a box with an open top. You do this by cutting square corners out of the paper.
 - a. What is the equation to represent the volume of this box $V=$ _____

 - b. What are the x intercepts of this equation? _____

 - c. What is the real life domain for this problem? _____

5. Given $f(x) = 3x-2$ Find x when $f(x) = 28$