Quiz 1.4 to 1.6 Review
Precalculus

Name: _____
Period: _____ Date: _____

1. Determine if the following functions are one-to-one:

$y = \sqrt{x+2}$ $y = 3x^2 + 5x - 1$ $y = \frac{5x-1}{2x-3}$

2. Find the inverse relation of f(x) = $2\sqrt{x+3}$ and state the domain & range

3. Verify that f(x) and g(x) are inverses using composition.

$f(x) = \frac{1}{4}x - 3$ $g(x) = 4x + 12$

4. Let f(x) = $\frac{1}{x+3}$ and g(x) = $2x - 5$ find:

a) $(f \circ g)(x)$ and give its domain.

b) g(g(x)) and give its domain.

c) (g/f)(x) and give its domain.

d) $(g \circ f)(-2)$

5. Write an equation whose graph can be obtained from the graph of $y = x^2$ by vertically stretching by a factor of 4, horizontally shifting 3 units right, reflecting over the x-axis and vertically shifting 2 units up.

6. Describe how the graph of f(x) = |x + 3| can be transformed to the graph of f(x) = | -x - 2| + 4

7. Find two functions f(x) and g(x) such that g(f(x)) = y

$$y = \frac{5}{x+3}$$

8. Let $f(x) = 3x^4 + 2x - 7$ Find an equation for g, the reflection of f across the y-axis.