

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

### 6.1 Day 1 Practice (HW)

#### Exercises

1.  $f(x) = x - 1$ ;  $g(x) = 5x - 2$

$$(f + g)(x) =$$

$$(f - g)(x) =$$

$$(f \cdot g)(x) =$$

$$\left(\frac{f}{g}\right)(x) =$$

2.  $f(x) = x^2 + x - 6$ ;  $g(x) = x - 2$

$$(f + g)(x) =$$

$$(f - g)(x) =$$

$$(f \cdot g)(x) =$$

$$\left(\frac{f}{g}\right)(x) =$$

3.  $f(x) = x^2 - 1$ ;  $g(x) = \frac{1}{x+1}$

$$(f + g)(x) =$$

$$(f - g)(x) =$$

$$(f \cdot g)(x) =$$

$$\left(\frac{f}{g}\right)(x) =$$

### 6.1 Day 2 Skills Practice (HW)

For each of the following find  $[f \circ g](x)$  and  $[g \circ f](x)$

4.  $f(x) = -3x$  and  $g(x) = -x + 8$

5.  $f(x) = x^2 - 1$  and  $g(x) = -4x^2$

6.  $f(x) = x^2 + 2x$  and  $g(x) = x - 9$

7.  $f(x) = 8x^2 + 3x$  and  $g(x) = 2x^2$

If  $f(x) = 3x$ ,  $g(x) = x + 4$ , and  $h(x) = x^2 - 1$ , evaluate each composite function for the given value.

8.  $f[g(1)] =$

9.  $g[h(0)] =$

10.  $g[f(-1)] =$

11.  $h[f(5)] =$

12.  $g[h(-3)] =$

13.  $h[f(0)] =$

If  $f = \{(0, 0), (4, -2)\}$  and  $g = \{(0, 4), (-2, 0), (5, 0)\}$  evaluate each composite function for the given value.

14.  $f[g(5)] =$

15.  $g[f(4)] =$