

Name: Key Date: \_\_\_\_\_

## Combining Functions Practice

Given the functions  $f(x) = 3x^2 + 5x - 8$  and  $g(x) = 2x^2 + 4x - 9$ 

1. Find  $f(x) + g(x)$

$$5x^2 + 9x - 17$$

2. Find  $g(x) - f(x)$

$$-x^2 - x - 1$$

3. Find  $f(2) + g(2)$

$$21$$

4. Find  $2f(x) - g(x)$

$$4x^2 + 6x - 7$$

Given the functions  $f(x) = 2x^2 + 3x - 5$  and  $g(x) = x^2 + 5x$  and  $h(x) = 3x^2$ 

5. Find  $h(x) \cdot g(x)$

$$3x^4 + 15x^3$$

6. Find  $2g(x) \cdot f(x)$

$$4x^4 + 26x^3 + 20x^2 - 50x$$

7. Find  $h(x) + g(x) - f(x)$

$$3x^2 + x^2 + 5x - 2x^2 - 3x + 5$$

$$2x^2 + 2x + 5$$

8. Find  $3f(x) - g(x)$

$$6x^2 + 9x - 15 - x^2 - 5x$$

$$5x^2 + 4x - 15$$

9. Find  $-4h(x) + g(x)$

$$-12x^2 + x^2 + 5x$$

$$-11x^2 + 5x$$

10. Find  $-2f(x) - 5g(x) + 7h(x)$

$$-4x^2 - 6x + 10 - 5x^2 - 25x + 21x^2$$

$$12x^2 - 31x + 10$$