

## Add, Subtract, Multiply &amp; Divide Functions

Date \_\_\_\_\_ Period \_\_\_\_\_

**Combine  $f(x)$  and  $g(x)$  as directed. Call your new function  $h(x)$ . Put  $h(x)$  in standard form.**

1)  $f(x) = 4x - 5$   
 $g(x) = 3x - 1$   
Find  $(f - g)(x)$

2)  $f(x) = 4x + 5$   
 $g(x) = x^3 - x^2$   
Find  $(f + g)(x)$

3)  $g(x) = 2x - 4$   
 $f(x) = -x^2 - 2$   
Find  $(g - f)(x)$

4)  $f(x) = 3x + 3$   
 $g(x) = 2x + 5$   
Find  $(f - g)(x)$

5)  $g(x) = 3x - 5$   
 $f(x) = 3x^3 - 4x$   
Find  $(g - f)(x)$

6)  $f(x) = x - 2$   
 $g(x) = x + 1$   
Find  $(f - g)(x)$

7)  $f(x) = 2x + 1$   
 $g(x) = x^2 + 4x$   
Find  $(f - g)(x)$

8)  $f(x) = -3x + 1$   
 $g(x) = 2x - 1$   
Find  $(f + g)(x)$

9)  $f(x) = 4x + 2$   
 $g(x) = x^2 - 4x$   
Find  $(f \cdot g)(x)$

10)  $f(x) = x^3 - 2$   
 $g(x) = 4x$   
Find  $(f \cdot g)(x)$

11)  $f(x) = 2x$   
 $g(x) = x^2 - 4x$   
Find  $(f \cdot g)(x)$

12)  $g(x) = x - 1$   
 $f(x) = 2x - 2$   
Find  $(g \cdot f)(x)$

13)  $f(x) = 2x + 5$   
 $g(x) = -2x^2 - 2x$   
Find  $(f \cdot g)(x)$

14)  $f(x) = x + 1$   
 $g(x) = x^2 + 5$   
Find  $(f \cdot g)(x)$

**Combine  $f(x)$  and  $g(x)$  as directed. Call your new function  $h(x)$ . State any bad values for  $x$ .**

15)  $f(x) = x^3 - 3x$   
 $g(x) = x - 2$   
Find  $\left(\frac{f}{g}\right)(x)$

16)  $g(x) = -4x + 2$   
 $f(x) = x - 5$   
Find  $\left(\frac{g}{f}\right)(x)$

17)  $f(x) = -x + 3$   
 $g(x) = x - 1$   
Find  $\left(\frac{f}{g}\right)(x)$

18)  $g(x) = x^3 - 2x^2$   
 $f(x) = 2x + 3$   
Find  $\left(\frac{g}{f}\right)(x)$