

Name \_\_\_\_\_ Block \_\_\_\_\_

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

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

2)  $f(x) = x^2 + 3x + 1$   
 $g(x) = 7x + 2$

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

3)  $f(x) = 3x^{\frac{3}{2}}$   
 $g(x) = \frac{1}{3}x^{\frac{3}{2}}$

4)  $f(x) = -x^{\frac{1}{2}}$   
 $g(x) = 6x^{\frac{1}{2}}$

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

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

6)  $f(x) = 2x^{\frac{2}{3}}$   
 $g(x) = 3x^{\frac{1}{3}}$

Find  $\frac{f(x)}{g(x)}$  State any restriction on x

7)  $f(x) = 3x^{\frac{1}{4}}$

$$g(x) = x^{\frac{5}{2}}$$

8)  $f(x) = 3x + 5$

$$g(x) = 4x^2 - 1$$

$$f(x) = x^2 + 2, g(x) = x - 1$$

9) Find  $f(g(x))$

10) Find  $g(f(x))$

$$f(x) = x^{\frac{1}{5}}, g(x) = x^{\frac{3}{4}}$$

11) Find  $f(g(x))$

12) Find  $g(f(x))$