**Find (a) (f+g)(3) (b) (f-g)(3) (c) (fg)(3) (d) (f/g)(3)**

1. f(x) = x + 3; g(x) = x2 2. f(x) = -x2; g(x) = 2x - 1

**Find**

**(a) (f+g)(x), (f-g)(x), (fg)(x), (f/g)(x)**

**(b) the domain of f+g, f-g, and fg**

**(c) the domain of f/g**

3. f(x) = x2 + 2, g(x) = 2x2 - 1 4. f(x) = $\sqrt{x+5}$, g(x) = $\sqrt{x+5}$ 5. f(x) = $\frac{2x}{x-4}$ g(x) = $\frac{x}{x+5}$

**Find**

**(a) (f**$ ∘ $**g)(x) (b) (g** $∘ $**f)(x) (c) (f**$ ∘$ **f)(x) (d) (g** $∘$ **g)(x)**

6. f(x) = 2x - 1, g(x) = -x2 7. f(x) = 3x2, g(x) = x - 1

**Find**

**(a) (f**$ ∘ $**g)(x) (b) (g** $∘ $**f)(x) (c) f(g(-2)) (d) g(f(3))**

8. f(x) = 2x - 5, g(x) = 3x + 7 9. f(x) = 3x2 + 4, g(x) = 5x

10. f(x) = 2x2 + 3x - 4, g(x) = 2x - 1 11. f(x) = 4x, g(x) = 2x3 - 5x

**Solve the equation (f**$ ∘ $**g)(x) = 0**

12. f(x) = x2 - 2, g(x) = x + 3 13. f(x) = x2 - x - 2, g(x) = 2x - 1