

**Composition of Functions** – in book: Section 3.7 p. 193

**Find  $[f \circ g](x)$  and  $[g \circ f](x)$ .**

1.  $f(x) = \frac{1}{2}x - 7$   
 $g(x) = x + 6$

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

3.  $f(x) = x^3$   
 $g(x) = x + 1$

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

5.  $f(x) = \frac{1}{3}x + 5$   
 $g(x) = x - 3$

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

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

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

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

10.  $f(x) = x^2 + 5x + 6$   
 $g(x) = x + 1$