

- 7 (a)  $f(x) = 2x - 3 \Rightarrow f(3) = 2(3) - 3 = 3$  and  $g(x) = 1 - x^2 \Rightarrow g(3) = 1 - 3^2 = -8$ .  
Thus,  $(f + g)(3) = f(3) + g(3) = 3 + (-8) = -5$ .
- (b)  $f(-1) = 2(-1) - 3 = -5$  and  $g(-1) = 1 - (-1)^2 = 0$ .  
Thus,  $(f - g)(-1) = f(-1) - g(-1) = -5 - 0 = -5$ .
- (c)  $f(0) = 2(0) - 3 = -3$  and  $g(0) = 1 - (0)^2 = 1$ .  
Thus,  $(fg)(0) = f(0)g(0) = (-3)(1) = -3$ .
- (d)  $f(2) = 2(2) - 3 = 1$  and  $g(2) = 1 - (2)^2 = -3$ .  
Thus,  $(f/g)(2) = \frac{f(2)}{g(2)} = \frac{1}{-3} = -\frac{1}{3}$ .