

$$(f+g)(x) = f(x) + g(x)$$

$$(f-g)(\#) = f(\) - g(\)$$

$$f(x) = 4x^2 - 3x \quad g(x) = -(6x + 6)$$

$$(f+g)(x) = f(x) + g(x)$$

$$= 4x^2 - 3x + (-6x + 6)$$

$$= 4x^2 - 9x + 6$$

$$f-g$$

$$= 4x^2 - 3x - (-6x + 6)$$

$$= 4x^2 + 3x - 6$$

$$f(x) = 4x^2 - 3x \quad g(x) = -6x + 6$$

$$(fg)(x) = (4x^2 - 3x)(-6x + 6)$$

$$= -24x^3 + 24x^2 + 18x^2 - 18x$$

$$= -24x^3 + 42x^2 - 18x$$

=

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

$$g(x) = -6x + 6$$

$$(f/g)(x) = \frac{4x^2 - 3x}{-6x + 6}$$

$$f(x) = x + 4 \quad g(x) = -2x + 1 \quad h(x) = 2x^2 + 3x - 2$$

$$\begin{aligned} 1) (fg)(2) &= f(2) \cdot g(2) \\ &= (2+4)(-2(2)+1) \\ &= 6(-4+1) = 6(-3) = \textcircled{-18} \end{aligned}$$

$$2) h(3) = 2(3)^2 + 3(3) - 2 = 18 + 9 - 2 = \textcircled{25}$$

$$3) h(1)/g(1) = \frac{2(1)^2 + 3(1) - 2}{-2(1) + 1} = \frac{3}{-1} = \textcircled{-3}$$

$$(f \circ g)(x) = f(g(x))$$

$$f(x) = x - 5 \quad g(x) = 3x^2$$

$$(f \circ g)(x) = (3x^2) - 5$$

$$(g \circ f)(x) = 3(x-5)^2$$

$$3(x^2 - 10x + 25)$$