

ΑΡΓΥΜΕΤΟΣ ΟΕ FUNCTIONS

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

Commutative

$$f(x) = \underline{3x-1} \quad g(x) = \underline{x^2 + 5x + 13}$$

$$f(x) + g(x) = \underline{3x-1} + \underline{x^2 + 5x + 13}$$

$$(f+g)(x) \Rightarrow \underline{x^2 + 8x + 12}$$

$$\begin{aligned} (g+f)(x) &= g(x) + f(x) = \underline{x^2 + 5x + 13} + \underline{3x - 1} \\ &= \underline{x^2 + 8x + 12} \end{aligned}$$

Subtraction

$$f(x) - g(x) = 3x - 1 - 1[x^2 + 5x + 13]$$

$$7 - 3 = 4$$

$$3 - 7 = -4$$

$$(f-g)(x) = \underline{3x} - \underline{1} - x^2 - \underline{5x} - \underline{13}$$

$$\rightarrow = -x^2 - 2x - 14$$

$$g(x) - f(x) = x^2 + 5x + 13 - 1(3x - 1)$$

$$(g-f)(x) = x^2 + 5x + 13 - 3x + 1$$

$$= x^2 + 2x + 14$$

Multiplication

$$f(x) \cdot g(x) = (3x-1)(x^2+5x+13)$$

$$(fg)(x) = 3x^3 + 15x^2 + 39x - x^2 - 5x - 13$$

$$3x^3 + 14x^2 + 34x - 13$$

$$3 \cdot 6 = 18$$

$$6 \cdot 3 = 18$$

$$g(x) \cdot f(x) = (x^2+5x+13)(3x-1)$$

$$= 3x^3 - x^2 + 15x^2 - 5x + 39x - 13$$

$$= 3x^3 + 14x^2 + 34x - 13$$

3x-1 $x^2 + 5x + 13$

$$(f \cdot g)(1) = f(1) \cdot g(1)$$

$$= 2 \cdot 19$$

$$= \textcircled{38}$$

$$(f+g)(3)$$

$$= f(3) + g(3)$$

$$= 8 + 37$$

$$= \textcircled{45}$$

$$\frac{9}{45}$$

Option 1: p 448 5-10, 16-23

Option 2: KUTA 9-14, 20

Option 3: ~~WORKSHEET~~ 10.2 16-24

Due 5/22

J 5/26