

Γ ΛΥΚΕΙΟΥ ΜΕΡΟΣ Α

15.3 1)

$$\alpha) (3x^4)' = 3(x^4)' = 3 \cdot 4x^3 = 12x^3$$

$$\beta) (-5x^3)' = -5(x^3)' = -5 \cdot 3x^2 = -15x^2$$

$$\gamma) (6x^7)' = 6(x^7)' = 6 \cdot 7x^6 = 42x^6$$

$$\delta) \left(\frac{x^3}{7}\right)' = \frac{1}{7}(x^3)' = \frac{1}{7} \cdot 3x^2 = \frac{3x^2}{7}$$

$$\epsilon) \left(-\frac{x^8}{5}\right)' = -\frac{1}{5}(x^8)' = -\frac{1}{5} \cdot 8x^7 = -\frac{8x^7}{5}$$

$$\sigma\tau) \left(\frac{x^{11}}{11}\right)' = \frac{\cancel{11}x^{10}}{\cancel{11}} = x^{10}$$

15.3 2)

$$(2x^5)' = 2(x^5)' = 2 \cdot 5x^4 = 10x^4$$

15.3 3)

$$(-4x^7)' = -4(x^7)' = -4 \cdot 7x^6 = -28x^6$$

15.3 4)

$$(3x^{11})' = 3(x^{11})' = 3 \cdot 11x^{10} = 33x^{10}$$

15.3 5)

$$(5x^4)' = 5(x^4)' = 5 \cdot 4x^3 = 20x^3$$

15.3 6)

$$\left(\frac{x^4}{5}\right)' = \frac{1}{5}(x^4)' = \frac{1}{5} \cdot 4x^3 = \frac{4x^3}{5}$$

15.3 7)

$$\left(\frac{x^7}{3}\right)' = \frac{1}{3}(x^7)' = \frac{1}{3} \cdot 7x^6 = \frac{7x^6}{3}$$

15.3 8)

$$\left(\frac{x^8}{4}\right)' = \frac{1}{4}(x^8)' = \frac{1}{4} \cdot 8x^7 = \frac{\cancel{8}^2 x^7}{\cancel{4}} = 2x^7$$

15.3 9)

$$9) \left(\frac{x^9}{12}\right)' = \frac{1}{12}(x^9)' = \frac{1}{\cancel{12}^3_4} \cdot \cancel{9}^3 x^8 = \frac{3x^8}{4}$$

15.3 10)

$$10) \left(\frac{7x^5}{9}\right)' = \frac{7}{9}(x^5)' = \frac{7}{9} \cdot 5x^4 = \frac{35x^4}{9}$$

$$11) \left(-\frac{2x^6}{13} \right)' = -\frac{2}{13} (x^6)' = -\frac{2}{13} 6x^5 = -\frac{12x^5}{13}$$

$$12) \left(-\frac{5x^4}{2} \right)' = -\frac{5}{2} (x^4)' = -\frac{5}{2} 4x^3 = -10x^3$$