

2º ESO A Deberes para el 20 Enero

Cuaderno de Apoyo pág. 79 ej. 4, 10 ; pág. 80 ej. 18

④

$$1.- P(x) + Q(x) = (4x^2 - 1) + (x^3 - 3x^2 + 6x - 2) = x^3 + 4x^2 - 3x^2 + 6x - 1 - 2 = \\ = x^3 + x^2 + 6x - 3$$

$$2.- P(x) - U(x) = (4x^2 - 1) - (x^2 + 2) = 4x^2 - 1 - x^2 - 2 = 3x^2 - 3$$

$$3.- P(x) + R(x) = (4x^2 - 1) + (6x^2 + x + 1) = 4x^2 + 6x^2 + x - 1 + 1 = 2x^2 + x$$

$$4.- 2P(x) - R(x) = 2 \cdot (4x^2 - 1) - (6x^2 + x + 1) = 8x^2 - 2 - 6x^2 - x - 1 = \\ = 8x^2 - 6x^2 - x - 2 - 1 = 2x^2 - x - 3$$

$$5.- S(x) + T(x) + U(x) = \left(\frac{1}{2}x^2 + 4\right) + \left(\frac{3}{2}x^2 + 5\right) + (x^2 + 2) = \frac{1}{2}x^2 + \frac{3}{2}x^2 + x^2 + \\ + 4 + 5 + 2 = 3x^2 + 11$$

$$6.- S(x) - T(x) + U(x) = \left(\frac{1}{2}x^2 + 4\right) - \left(\frac{3}{2}x^2 + 5\right) + (x^2 + 2) = \frac{1}{2}x^2 + 4 - \frac{3}{2}x^2 - 5 + \\ + x^2 + 2 = -x^2 + 1$$

⑩

$$a) A(x) \cdot B(x) = (-3x^2 + 3x) \cdot (2x^2 + 3) = -6x^4 - 9x^2 + 6x^3 + 9x$$

$$b) B(x) \cdot C(x) = (2x^2 + 3) \cdot (3x^4 + 2x^3 - x^2 + 5) = 6x^6 + 4x^5 - 2x^4 + 10x^2 + \\ + 9x^4 + 6x^3 - 3x^2 + 15 = 6x^6 + 4x^5 + 7x^4 + 6x^3 + 7x^2 + 15$$

$$c) C(x) \cdot D(x) = (3x^4 + 2x^3 - x^2 + 5) \cdot (x + 3) = 3x^5 + 9x^4 + 2x^4 + 6x^3 - x^3 - \\ - 3x^2 + 5x + 15 = 3x^5 + 11x^4 + 5x^3 - 3x^2 + 5x + 15$$

$$d) D(x) \cdot C(x) = (x + 3) \cdot (3x^4 + 2x^3 - x^2 + 5) = 3x^5 + 2x^4 - x^3 + 5x + \\ + 9x^4 + 6x^3 - 3x^2 + 15 = 3x^5 + 11x^4 + 5x^3 - 3x^2 + 5x + 15$$

(18)

$$a) \begin{array}{r} 2x^7 + x^6 - 9x^5 - 5x^4 + 9x^2 + 8 \\ -2x^7 + 6x^5 - 2x^4 + 10x^3 + 8 \end{array} \quad \begin{array}{r} x^4 - 3x^2 + x - 5 \\ 2x^3 + x^2 - 3x - 4 \end{array}$$

$$\begin{array}{r} x^4 - 3x^5 - 7x^4 + 10x^3 + 9x^2 \\ -x^6 + 3x^4 - x^3 + 5x^2 \\ \hline -3x^6 - 4x^4 + 9x^3 + 14x^2 \\ + 3x^5 - 9x^3 + 3x^2 - 15x \\ \hline -4x^4 + 17x^2 - 15x \\ + 4x^4 - 12x^2 + 4x - 20 \\ \hline -5x^2 - 11x - 20 \end{array}$$

$$b) \begin{array}{r} 6x^5 + 2x^4 - 17x^3 + 20x - 25 \\ -6x^5 + 9x^3 - 15x^2 - 25 \end{array} \quad \begin{array}{r} 2x^3 - 3x + 5 \\ 3x^2 + x - 4 \end{array}$$

$$\begin{array}{r} 2x^4 - 8x^3 - 15x^2 + 20x \\ -2x^4 + 3x^2 - 5x \\ \hline -8x^3 - 12x^2 + 15x - 25 \\ 8x^3 + 12x + 20 \\ \hline -12x^2 + 27x - 5 \end{array}$$

$$c) \begin{array}{r} 2x^5 - 6x^4 + 20x^2 - 38x + 12 \\ -2x^5 + 10x^3 - 6x^2 - 38x + 12 \end{array} \quad \begin{array}{r} x^3 - 5x + 3 \\ 2x^2 - 6x + 10 \end{array}$$

$$\begin{array}{r} -6x^4 + 10x^3 + 14x^2 - 38x \\ + 6x^4 - 30x^2 + 18x \\ \hline 10x^3 - 16x^2 - 20x + 12 \\ -10x^3 + 50x - 30 \\ \hline -16x^2 + 30x - 18 \end{array}$$

$$\begin{array}{r}
 d) \quad 4x^6 \\
 \underline{-4x^6} \\
 -12x^4 + 8x^3 \\
 +10x^4 - 2x^3 \\
 \hline
 -2x^4 + 6x^3 \\
 +2x^4 \quad -5x^2 + x \\
 \hline
 6x^3 - 5x^2 + x + 9 \\
 \underline{-6x^3 + 15x - 3} \\
 -5x^2 + 16x + 6
 \end{array}
 \quad +9 \quad \frac{2x^3 - 5x + 1}{2x^3 - x + 3}$$

$$\begin{array}{r}
 e) \quad 6x^5 - 13x^5 \\
 \underline{-6x^6 + 9x^5} \\
 -4x^5 \\
 4x^5 - 6x^4 \quad -2x^2 \\
 \hline
 -6x^4 - 23x^3 + 48x^2 \\
 6x^4 - 9x^3 + 3x \\
 \hline
 -32x^3 + 48x^2 + 3x - 4 \\
 +32x^3 - 48x^2 + 16 \\
 \hline
 3x + 12
 \end{array}
 \quad -4 \quad \frac{2x^3 - 3x^2 + 1}{3x^3 - 2x^2 - 3x - 16}$$

$$\begin{array}{r}
 f) \quad x^7 + 3x^6 - 2x^5 - 3x^4 + 5x^2 + 1 \\
 \underline{-x^7 - x^6 + 2x^5} \\
 2x^6 - 3x^4 \\
 \underline{-2x^6 - 2x^5 + 4x^4} \\
 -2x^5 + x^4 \\
 +2x^5 + 2x^4 - 2x^3 \\
 \hline
 3x^4 - 2x^3 + 5x^2 \\
 \underline{-3x^4 - 3x^3 + 6x^2} \\
 -5x^3 + 11x^2 \\
 +5x^3 + 5x^2 + 10x \\
 \hline
 16x^2 + 10x + 1 \\
 \underline{-16x^2 - 16x + 32} \\
 -21
 \end{array}
 \quad +1 \quad \frac{x^2 + x - 2}{x^5 + 2x^4 - 2x^3 + 3x^2 - 5x + 16}$$

g)

$$\begin{array}{r} x^3 - 4x^2 + 2x^2 - 8x + 6 \\ -x^3 + 2x^2 - 3x^3 \\ \hline \end{array}$$

$$\begin{array}{r} -2x^3 - 3x^3 + 2x^2 \\ +2x^3 - 4x^3 + 6x^2 \\ \hline \end{array}$$

$$\begin{array}{r} -7x^3 + 8x^2 - 8x \\ +7x^3 - 14x^2 + 21x \\ \hline \end{array}$$

$$\begin{array}{r} -6x^2 + 13x + 6 \\ +6x^2 - 12x + 18 \\ \hline \end{array}$$

$$\begin{array}{r} x + 24 \end{array}$$

$$\begin{array}{r} x^2 - 2x + 3 \\ \hline x^3 - 2x^2 - 7x - 6 \end{array}$$