

$$5) P(x) = 3x^3 - 5x^2 - 9x + 3 \quad Q(x) = x^4 - 12x^2 - 11x + 9$$

a) Calcula $P(3)$

Podemos hacerlo de dos formas:

$$P(3) = 3 \cdot 3^3 - 5 \cdot 3^2 - 9 \cdot 3 + 3 = 12$$

por Ruffini

$$\begin{array}{r|rrrr} & 3 & -5 & -9 & 3 \\ 3 & & 9 & 12 & 9 \\ \hline & 3 & 4 & 3 & 12 \end{array}$$

luego $P(3) = 12$

b) $P(-1) = 4$

$$\begin{array}{r|rrrr} & 3 & -5 & -9 & 3 \\ -1 & & -3 & 8 & 1 \\ \hline & 3 & -8 & -1 & 4 \end{array}$$

c) $Q(3) = -105$

$$\begin{array}{r|rrrr} & 1 & -12 & -11 & 9 \\ 3 & & 3 & -27 & -114 \\ \hline & 1 & -9 & -38 & -105 \end{array}$$

d) $Q(-1) = 7$

$$\begin{array}{r|rrrr} & 1 & -12 & -11 & 9 \\ -1 & & -1 & 13 & -2 \\ \hline & 1 & -13 & 2 & 7 \end{array}$$

6) $2x^3 - 7x^2 - 17x + 10$

a) $x = 2 \rightarrow$ Polinomio = -36

$$\begin{array}{r|rrrr} & 2 & -7 & -17 & 10 \\ 2 & & 4 & -6 & -46 \\ \hline & 2 & -3 & -23 & -36 \end{array}$$

b) $x = -3 \rightarrow$ Polinomio = -56

$$\begin{array}{r|rrrr} & 2 & -7 & -17 & 10 \\ -3 & & -6 & 39 & -66 \\ \hline & 2 & -13 & 22 & -56 \end{array}$$

c) $x = 5 \rightarrow$ Polinomio = 0

$$\begin{array}{r|rrrr} & 2 & -7 & -17 & 10 \\ 5 & & 10 & 15 & -10 \\ \hline & 2 & 3 & -2 & 0 \end{array}$$