

Διαίρεση πολυωνύμων

Ενότητα 17

$$\begin{array}{r|l} 1. \quad \textcircled{\beta} & (3x^2 + 2) \\ & - (3x^2 - 3x) \\ \hline & 3x + 2 \\ & - (3x - 3) \\ \hline & 5 \end{array}$$

$$\Delta = \delta \cdot \Pi + \psi$$

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

(52)

$$\begin{array}{r|l} 3x^3 + 3x^2 - x + 1 & 3x^2 - 1 \\ - (3x^3 - x) & x + 1 \\ \hline 3x^2 + 1 & \\ - (3x^2 - 1) & \\ \hline 2 & \end{array}$$

$$3x^3 + 3x^2 - x + 1 = (3x^2 - 1)(x + 1) + 2$$

8. $P(x) = x^3 + 5x^2 - 1$

$P(x) : (x+3)$

$$\begin{array}{r|l}
 x^3 + 5x^2 - 1 & x+3 \\
 \underline{-(x^3 + 3x^2)} & x^2 + 2x - 6 \\
 2x^2 - 1 & \\
 \underline{-(2x^2 + 6x)} & \\
 -6x - 1 & \\
 \underline{-(-6x - 18)} & \\
 17 &
 \end{array}$$

17.

$$x^3 + 5x^2 - 1 = (x+3)(x^2 + 2x - 6) + 17$$

+17

$$P(x) = x^3 + 5x^2 - 1 : (x+3)$$

$$\begin{array}{r}
 1 \quad 5 \quad 0 \quad -1 \quad \textcircled{-3} \\
 \downarrow \quad -3 \quad -6 \quad 18 \\
 1 \quad 2 \quad -6 \quad \textcircled{+17} \\
 \hline
 \text{unpolim}
 \end{array}$$

$$(x^3 + 5x^2 - 1) = (x+3)(1 \cdot x^2 + 2x - 6) + 17$$

6.

a)

$$P(x) = (3x^3 + 5)(x^2 - 3) + 2x - 1$$

$$P(x) = 3x^5 - 9x^3 + 5x^2 - 15 + 2x - 1$$

$$P(x) = 3x^5 - 9x^3 + 5x^2 + 2x - 16$$

b)

$$Q(x) = P(x) - 2x + 1$$

$$Q(x) = 3x^5 - 9x^3 + 5x^2 + \cancel{2x} - 16 - \cancel{2x} + 1$$

$$Q(x) = 3x^5 - 9x^3 + 5x^2 - 15$$

$3x^5 - 9x^3 + 5x^2 - 15$ $-(3x^5 - 9x^3)$ $5x^2 - 15$ $-(5x^2 - 15)$ 0	$\frac{x^2 - 3}{3x^3 + 5}$
---	----------------------------

✓

2. (B) $(6x^3 - x^2 - 14x + 5) : (2x - 1)$

$$\begin{array}{r|l}
 6x^3 - x^2 - 14x + 5 & 2x - 1 \\
 \underline{-(6x^3 - 3x^2)} & 3x^2 + x - \frac{13}{2} \\
 2x^2 - 14x + 5 & \\
 \underline{-(2x^2 - x)} & \\
 -13x + 5 & \\
 \underline{-(-13x + \frac{13}{2})} & \\
 5 - \frac{13}{2} &
 \end{array}$$

$$\left(-\frac{3}{2} \right)$$

Enoplos Madyne

17

(1) a r s c

(2) a r s

(4)

(5) .

(7) .