

$$\begin{array}{r}
 2. \text{ (B)} \quad 6x^3 - x^2 - 14x + 5 \quad | \quad \begin{array}{l} 2x-1 \\ \hline 3x^2 + x - \frac{13}{2} \end{array} \\
 - (6x^3 - 3x^2) \\
 \hline
 2x^2 - 14x + 5 \\
 - (2x^2 - x) \\
 \hline
 -13x + 5 \\
 - (-13x + \frac{13}{2}) \\
 \hline
 5 - \frac{13}{2} \\
 \hline
 \textcircled{-\frac{3}{2}}
 \end{array}$$

$$\begin{aligned}
 \text{(8)} \quad (x-2)^3 &= x^3 - 3x^2 \cdot 2 + 3x \cdot 2^2 - 2^3 \\
 &= x^3 - 6x^2 + 12x - 8
 \end{aligned}$$

$$\begin{array}{r}
 x^4 \quad | \quad x^3 - 6x^2 + 12x - 8 \\
 - (x^4 - 6x^3 + 12x^2 - 8x) \quad | \quad x+6 \\
 \hline
 6x^3 - 12x^2 + 8x \\
 - (6x^3 - 36x^2 + 72x - 48) \\
 \hline
 24x^2 - 64x + 48
 \end{array}$$

$$43. \quad P(0) = 0$$

$$P(2) = -1$$

$$P(-2) = 3.$$

$$P(x) = (x^3 - 4x) n(x) + u(x)$$

$$\boxed{P(x) = (x^3 - 4x) n(x) + ax^2 + bx + c}$$

$$P(0) = \underline{\underline{c}} = 0$$

$$P(2) = 4a + 2b = -1$$

$$\textcircled{+} \quad 8a = 2$$

$$P(-2) = 4a - 2b = 3$$

$$\textcircled{a = \frac{1}{4}}$$

$$\downarrow \quad 4 \cdot \frac{1}{4} + 2b = -1$$

$$2b = -2 \quad \textcircled{b = -1}$$

$$5. \quad P(x) = \underbrace{(x^2 - 5x)}_{\delta(x)} \underbrace{(5x-1)}_{\eta(x)} - 3x + 2$$

$$\textcircled{A} \quad \eta(x) = 5x-1 \quad v(x) = -3x+2$$

\textcircled{B}

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

$$\delta(x) = \delta(x) \quad \eta(x) \quad v(x)$$

\textcircled{X}

$$40. \quad P(x) = (x^2-1)v(x) + 2x+1$$

$$P(0) = 0$$

$$\textcircled{A} \quad P(1) = 3$$

$$\textcircled{B} \quad P(x) = (x^2-x)\eta(x) + v(x)$$

$$P(x) = (x^2-x)\eta(x) + \alpha x + \beta$$

$$P(0) = \underline{\underline{B}} = 0$$

$$P(1) = \alpha + \beta = 3$$

$$\alpha = 3.$$

$$U(x) = 3x + 0.$$

42.

$$P(x) = (x-2)q(x) + 10$$

$$\underline{\underline{P(2) = 10}}$$

$$\underline{\underline{P(-3) = 5}}$$

$$P(x) = (x^2 + x - 6)q(x) + v(x)$$

$$P(x) = (x^2 + x - 6)q(x) + ax + b$$

$$P(2) = 2a + b = 10 \quad \Rightarrow \quad -2a - b = 10$$

$$\oplus$$

$$P(-3) = -3a + b = 5$$

$$-5a = 15$$

$$a = -3$$

$$b = -4$$

45. $P(x)$ 3ος βαθμού

$$P(0) = 3$$

$$P(1) = 4$$

$$P(x) = (x^2 - 2x + 3) \cdot \pi(x)$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 3ος & 2ος & 1ος \end{array}$$

$$P(x) = (x^2 - 2x + 3)(ax + b)$$

$$P(0) = 3(0 + b) = 3$$

$$3b = 3$$

$$\underline{\underline{b = 1}}$$

$$P(1) = 2(a + b) = 4$$

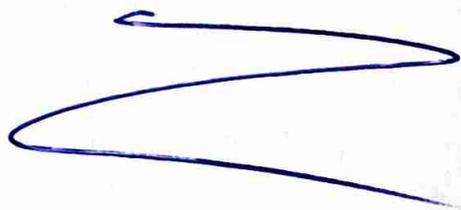
$$2(a + 1) = 4$$

$$2a + 2 = 4$$

$$2a = 2$$

$$\underline{\underline{a = 1}}$$

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



$$48. \quad p(x) = x^3 + \alpha x^2 + \beta x - 1$$

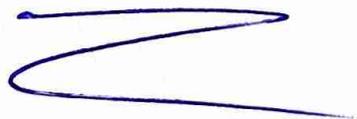
$$\text{To } x^2 + 1$$

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

$$\beta - 1 = 0 \quad \Rightarrow \quad \beta = 1$$

$$-1 - \alpha = 0$$

$$\alpha = -1$$



54.

$$P(x) = \alpha x^3 - 5x^2 + Bx + 9$$

Εχουμε παραγοντα $(x-3)^2$

α	-5	B	9	3
\downarrow	3α	$9\alpha - 15$	$27\alpha + 3B + 45$	
α	$3\alpha - 5$	$9\alpha + B - 15$	$27\alpha + 3B - 36$ <div style="text-align: right; font-size: small;">αναίτη 0</div>	

α	$3\alpha - 5$	$9\alpha + B - 15$	3
\downarrow	3α	$18\alpha - 15$	
α	$6\alpha - 5$	$27\alpha + B - 30$ <div style="text-align: right; font-size: small;">αναίτη 0</div>	

$$\begin{cases} 27\alpha + 3B - 36 = 0 \\ 27\alpha + B - 30 = 0 \end{cases}$$

$$27\alpha + B - 30 = 0$$

$$\alpha = 1$$

$$-27\alpha - 3B + 36 = 0$$

$$-3B = 0$$

$$-2B + 6 = 0$$

$$B = 3$$

$$50. \quad P(x) = \alpha x^3 - (a+B)x + B - 4$$

$$\text{То } x^2 - 2x - 3, \text{ разложив}$$

↓

$$(x-3)(x+1)$$

↓

↓

$$P(3) = 0$$

$$P(-1) = 0$$

$$P(3) = 27\alpha - 3(a+B) + B - 4 = 0$$

$$27\alpha - 3\alpha - 3B + B - 4 = 0$$

$$24\alpha - 2B = 4$$

$$12\alpha - B = 2$$

$$P(-1) = -\cancel{\alpha} + \cancel{a} + B + B - 4 = 0$$

$$2B = 4$$

$$B = 2$$

$$a = \frac{1}{3}$$

$$53 \textcircled{a} P(x) = (\lambda^2 + \lambda)x^4 + (\lambda + 1)x^3 + 3x^2 + \mu - 1$$

Зов Бадров кел $x+1$ репарачи.

$$\bullet \lambda^2 + \lambda = 0$$

$$\lambda(\lambda + 1) = 0$$

$$\lambda = 0 \text{ и } \lambda = -1$$

$$Av \lambda = 0$$

$$P(x) = x^3 + 3x^2 + \mu - 1 \quad \text{Зов}$$

$$\cancel{Av \lambda = -1}$$

$$\cancel{P(x) = 3x^2 + \mu - 2 \quad \text{Зов}}$$

$$P(-1) = 0$$

$$P(-1) = -1 + 3 + \mu - 1 = 0$$

$$\underline{\underline{\mu = -1}}$$

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

(B) $P(x) : (x^2 + 3)$

$$\begin{array}{r|l} x^3 + 3x^2 - 2 & x^2 + 3 \\ - (x^3 + 3x) & x + 3 \\ \hline 3x^2 - 3x - 2 & \\ - (3x^2 + 9) & \\ \hline -3x - 11 & \end{array}$$

$$P(x) = (x^2 + 3)(x + 3) - 3x - 11$$

$$\textcircled{1} \quad P(x) = (x-1)$$

$$\begin{array}{cccc} 1 & 3 & 0 & -2 & \textcircled{1} \\ \downarrow & 1 & 4 & 4 & \\ \underline{1} & 4 & 4 & 2 & \end{array}$$

$$P(x) = x^2 + 4x + 4$$

$$u = 2$$

$$\textcircled{2} \quad Q(x) = P(x) + (x-2)^{10}$$

$$Q(1) = P(1) + 1 = 2 + 1 = 3$$

$$Q(0) = P(0) - 2^{10} = -2 - 2^{10}$$

Επορω Μαθημα

17

46

49

54

≡ εκινω

το μαθημα

με κατασκευασ

εξισωση - Avissus