

$\epsilon \cap A \cdot \wedge (\text{ΟΜΑΔΑ } A') - \epsilon \Sigma \text{ΕΡΓΑΣΙΑ}$

$\Lambda Y \Sigma F \backslash \Sigma$

ΟΤΜΑ Α

A<sub>1</sub>] Ομπία Σχ. Βιβλίου

A<sub>2</sub>] α) Σ β) Σ γ) Λ δ) Σ ε) Λ

A<sub>3</sub>] 1.(a) 2.(b) 3.(b)

A<sub>4</sub>] a)  $c \cdot f'(x)$

b)  $g'(f(x)) \cdot f'(x)$

ΟΤΜΑ Β

B <sub>1</sub>	X <sub>i</sub>	V <sub>i</sub>	f <sub>i</sub> %	X <sub>i</sub> ·V <sub>i</sub>
	5	3	15	15
	6	5	25	30
	7	3	15	21
	8	7	35	56
	9	2	10	18
ΣΥΝΟΛΑ	20	100	140	

B<sub>2</sub>]  $\bar{x} = \frac{\sum x_i v_i}{V} = \frac{140}{20} = 7$

B<sub>3</sub>]  $M_0 = 8$

B<sub>4</sub>]  $S = \frac{x_{10} + x_{11}}{2} = \frac{7+7}{2} = 7$

B<sub>5</sub>]  $f_4 + f_5 = 35 + 10 = 45\%$

ΟΤΜΑ Γ

F<sub>1</sub>]  $\lim_{x \rightarrow 1^-} f(x) = \frac{2}{k}, \quad \lim_{x \rightarrow 1^+} f(x) = 1+k, \quad f(1) = 1+k$

Αρνεί μα πρέπει

$$\frac{2}{k} = 1+k \rightarrow k^2 + k = 2 \rightarrow k^2 + k - 2 = 0$$

$$\Delta = 1 - 4(-2) = 9$$

$$k_{1,2} = \frac{-1 \pm 3}{2} \quad \begin{cases} k_1 = 1 \\ k_2 = -2 \end{cases}$$

12

$$f(x) = x^2 + 1, \quad f'(x) = 2x, \quad \boxed{\text{[Handwritten notes: } f'(x) = 2x, \text{ etc.]}}$$

13

$$A = 50^2 + 1 - 2 \cdot 245 + 1 = 2500 + 1 - 490 + 1 \\ = 2012$$

14

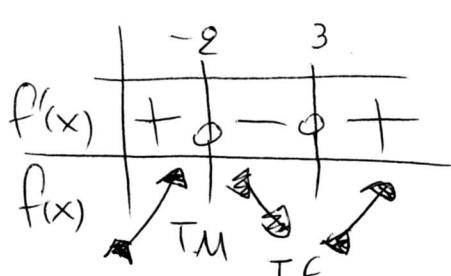
$$\int_0^2 f(x) dx = \int_0^1 f(x) dx + \int_1^2 f(x) dx = \\ = \int_0^1 2x dx + \int_1^2 (x^2 + 1) dx = 2 \left[ \frac{x^2}{2} \right]_0^1 + \left[ \frac{x^3}{3} \right]_1^2 + (2-1) \\ = 2 \cdot \frac{1}{2} + \left( \frac{8}{3} - \frac{1}{3} \right) + 1 = 1 + \frac{7}{3} + 1 = 2 + \frac{7}{3} = \frac{13}{3}$$

Form A D

D<sub>1</sub>  $f'(3) = 0 \rightarrow 3^2 + 2 \cdot 3 - 6 = 0 \rightarrow 9 + 6 - 6 = 9 \rightarrow \boxed{a=1}$

D<sub>2</sub>

$$f'(x) = x^2 - x - 6, \quad f'(x) = 0 \rightarrow \Delta = (-1)^2 - 4 \cdot 1 \cdot (-6) = 25$$



$$x_{1,2} = \frac{1 \pm 5}{2} \quad \begin{cases} x_1 = 3 \\ x_2 = -2 \end{cases}$$

$f \text{ u } x_1 = 3 \text{ T.E}$

$f \text{ u } x_2 = -2 \text{ T.M}$

D<sub>3</sub>

$$\lim_{x \rightarrow 3} \frac{x^2 - x - 6}{\sqrt{x} - \sqrt{3}} \stackrel{(0)}{=} \lim_{x \rightarrow 3} \frac{(x-3)(x+2)(\sqrt{x} + \sqrt{3})}{(\sqrt{x})^2 - (\sqrt{3})^2} \stackrel{(x \neq 3)}{=} \lim_{x \rightarrow 3} \frac{(x-3)(x+2)(\sqrt{x} + \sqrt{3})}{x - 3} = \\ = (3+2) \cdot (\sqrt{3} + \sqrt{3}) = 6 \cdot 2\sqrt{3} = 12\sqrt{3}$$