

2 μ

$$x^2 - 5x + 6 = 0 \quad (1)$$

)

$$\rho_1, \rho_2 \quad (1) \mu \quad \rho_1 < \rho_2.$$

)

$$\rho_1 < y < \rho_2.$$

i.

$$A = ||2 - y| - |y - 6||$$

μ

μ .

ii.

$$A^5 - 32 = 0$$

)

2

μ

$$2\rho_1, 2\rho_2.$$

)

$$\left(x + \frac{1}{x} + 1\right)^2 - 7\left(x + \frac{1}{x}\right) + 5 = 0 \quad (2)$$

)

(2)

$$\lambda x^2 - 4\lambda x + 3 = 0, \quad \mu$$

$$\rho_1 = \frac{5 - \sqrt{1}}{2} = 2, \quad \rho_2 = \frac{5 + \sqrt{1}}{2} = 3.$$

$$\text{i. } 2 < y < 3, \quad 2 - y < 0, \quad -4 < y - 6 < -3, \quad y - 6 < 0, \quad :$$

$$A = |-2 + y - (-y + 6)| = |-2 + y + y - 6| = |2y - 8|$$

$$2 < y < 3 \Leftrightarrow 4 < 2y < 6 \Leftrightarrow -4 < 2y - 8 < -2, \quad 2y - 8 < 0 \quad A = -2y + 8.$$

$$\text{ii. } A^5 - 32 = 0 \Leftrightarrow A^5 = 32 \Leftrightarrow A = \sqrt[5]{2^5} = 2 \Leftrightarrow -2y + 8 = 2 \Leftrightarrow 8 - 2 = 2y \Leftrightarrow 2y = 6 \Leftrightarrow y = 3$$

$$\text{) } \mu \quad \mu \quad S = 2 \cdot 1 + 2 \cdot 2 = 4 + 6 = 10 \quad \mu$$

$$P = 2 \cdot 1 \cdot 2 \cdot 2 = 4 \cdot 2 \cdot 3 = 24.$$

Vieta

$$x^2 - Sx + P = 0 \Leftrightarrow x^2 - 10x + 24 = 0$$

$$\text{) } \mu \quad x + \frac{1}{x} = \omega, \quad x \neq 0 \quad :$$

$$\left( x + \frac{1}{x} \right)^2 - 7 + 5 = 0 \Leftrightarrow x^2 + 2 + \frac{1}{x^2} - 7 + 5 = 0 \Leftrightarrow x^2 - 5 + \frac{1}{x^2} + 6 = 0 \Leftrightarrow x^2 = 2 \quad = 3.$$

$$= 2 \quad x + \frac{1}{x} = 2 \Leftrightarrow x^2 + 1 = 2x \Leftrightarrow x^2 - 2x + 1 = 0 \Leftrightarrow (x - 1)^2 = 0 \Leftrightarrow x = 1$$

$$= 3 \quad x + \frac{1}{x} = 3 \Leftrightarrow x^2 + 1 = 3x \Leftrightarrow x^2 - 3x + 1 = 0. \quad = 3^2 - 4 \cdot 1 \cdot 1 = 9 - 4 = 5$$

$$x_{1,2} = \frac{3 \pm \sqrt{5}}{2}$$

$$\text{) } x = 1 \quad \lambda x^2 - 4\lambda x + 3 = 0, \quad :$$

$$\lambda \cdot 1^2 - 4\lambda \cdot 1 + 3 = 0 \Leftrightarrow \lambda - 4\lambda + 3 = 0 \Leftrightarrow -3\lambda = -3 \Leftrightarrow \lambda = 1.$$

$$: x^2 - 4x + 3 = 0$$

$$\mu \quad 1 \quad 3.$$

**Ασκησόπολις**  
ο πιο πλούσιος κόσμος  
θεμάτων και ασκήσεων