

1.30 1)

Πρέπει

$$f(-1) = -3 \Rightarrow -\alpha + \beta = -3 \quad (1)$$

και

$$f(3) = 5 \Rightarrow 3\alpha + \beta = 5 \quad (2)$$

Λύνοντας το σύστημα των (1) και (2) βρίσκουμε $\boxed{\alpha = 2}$ και $\boxed{\beta = -1}$

1.30 2)

Πρέπει

$$f(1) = -1 \Rightarrow 2\alpha \cdot 1 - \beta - 3 = -1 \Rightarrow 2\alpha - \beta = 2 \quad (1)$$

και

$$f(-2) = 11 \Rightarrow 2\alpha \cdot (-2) - \beta - 3 = 11 \Rightarrow -4\alpha - \beta = 14 \quad (2)$$

Λύνοντας το σύστημα των (1) και (2) βρίσκουμε $\boxed{\alpha = -2}$ και $\boxed{\beta = -6}$

1.30 3)

Πρέπει

$$f(-1) = 1 \Rightarrow \alpha \cdot (-1)^2 + \beta(-1) - 1 = 1 \Rightarrow \alpha - \beta - 1 = 1 \Rightarrow \alpha - \beta = 2 \quad (1)$$

και

$$f(2) = 1 \Rightarrow \alpha \cdot 2^2 + \beta \cdot 2 - 1 = 1 \Rightarrow 4\alpha + 2\beta = 2 \quad (2)$$

Λύνοντας το σύστημα των (1) και (2) βρίσκουμε $\boxed{\alpha = 1}$ και $\boxed{\beta = -1}$

1.30 4)

Πρέπει

$$f(-3) = 0 \Rightarrow \frac{\alpha(-3) + 3}{-3 + \beta} = 0 \Rightarrow -3\alpha + 3 = 0 \Rightarrow -3\alpha = -3 \Rightarrow \boxed{\alpha = 1} \quad (1)$$

και

$$f(1) = 2 \Rightarrow \frac{\alpha \cdot 1 + 3}{1 + \beta} = 2 \stackrel{\alpha=1}{\Rightarrow} \frac{\alpha \cdot 1 + 3}{1 + \beta} = 2 \Rightarrow 1 + 3 = 2(1 + \beta) \Rightarrow 2 + 2\beta = 4 \Rightarrow$$

$$\Rightarrow 2\beta = 2 \Rightarrow \boxed{\beta = 1}$$