

11.2 1)

$$\text{Είναι } d(A, \varepsilon) = 2 \Rightarrow \frac{|4 \cdot 1 + 3 \cdot (-2) + \mu|}{\sqrt{4^2 + 3^2}} = 2 \Rightarrow \frac{|\mu - 2|}{5} = 2 \Rightarrow |\mu - 2| = 10 \Rightarrow \begin{cases} \mu - 2 = 10 \Rightarrow \mu = 12 \\ \text{ή} \\ \mu - 2 = -10 \Rightarrow \mu = -8 \end{cases}$$

11.2 2)

$$\begin{aligned} \text{Είναι : } d(A, \varepsilon) = 3 &\Rightarrow \frac{|3 \cdot 2\mu + 4(\mu - 2) + 3|}{\sqrt{3^2 + 4^2}} = 3 \Rightarrow \frac{|6\mu + 4\mu - 8 + 3|}{5} = 3 \Rightarrow \\ &\Rightarrow |10\mu - 5| = 15 \Rightarrow \begin{cases} 10\mu - 5 = 15 \\ \text{ή} \\ 10\mu - 5 = -15 \end{cases} \Rightarrow \begin{cases} \mu = 2 \\ \text{ή} \\ \mu = -1 \end{cases} \end{aligned}$$

11.2 3)

$$\begin{aligned} \text{Είναι : } d(A, \varepsilon) = 3 &\Rightarrow \frac{|8(2\mu - 1) + 15(2 - \mu) - 6|}{\sqrt{8^2 + 15^2}} = 1 \Rightarrow \frac{|16\mu - 8 + 30 - 15\mu - 6|}{\sqrt{289}} = 1 \Rightarrow \frac{|\mu + 16|}{17} = 1 \\ &\Rightarrow |\mu + 16| = 17 \Rightarrow \begin{cases} \mu + 16 = 17 \\ \text{ή} \\ \mu + 16 = -17 \end{cases} \Rightarrow \begin{cases} \mu = 1 \\ \text{ή} \\ \mu = -33 \end{cases} \end{aligned}$$

11.2 4)

$$\begin{aligned} \text{Είναι } d(A, \varepsilon) = 3 &\Rightarrow \frac{|6 \cdot (2\mu + 4) - 8(-\mu - 2) - 10|}{\sqrt{6^2 + (-8)^2}} = 3 \Rightarrow \\ &\Rightarrow \frac{|12\mu + 24 + 8\mu + 16 - 10|}{\sqrt{100}} = 3 \Rightarrow \\ &\Rightarrow \frac{|20\mu + 30|}{10} = 3 \Rightarrow |20\mu + 30| = 30 \Rightarrow \begin{cases} 20\mu + 30 = 30 \\ \text{ή} \\ 20\mu + 30 = -30 \end{cases} \Rightarrow \begin{cases} \mu = 0 \\ \text{ή} \\ \mu = -3 \end{cases} \end{aligned}$$