

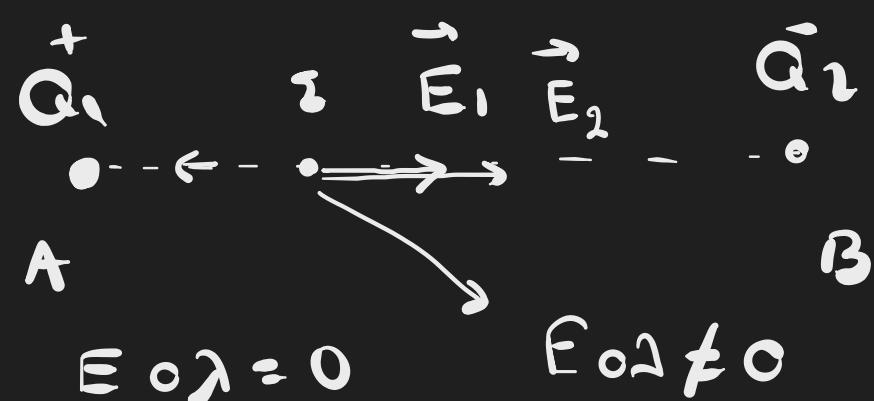
12
6ηλ.
52

B)

$$Q_1 = +2 \cdot 10^{-6} \text{ C}$$

$$Q_2 = -8 \cdot 10^{-6} \text{ C}$$

$$d = 0,3 \text{ m}$$



$$E_1 = E_2 \Rightarrow k \frac{|Q_1|}{x^2} = k \frac{|Q_2|}{(d+x)^2} \Rightarrow \frac{2}{x^2} = \frac{8}{(d+x)^2} \Rightarrow$$

$$\Rightarrow \pm \frac{1}{x} = \pm \frac{2}{d+x} \Rightarrow$$

$$2x = d+x \Rightarrow x = d = 0,3 \text{ m}$$

$$-2x = d+x \Rightarrow -3x = d \Rightarrow$$

$$x = -d/3 = -0,1 \text{ m}$$

α.ν.ο.ρ.

13. d = 6 m

A) +4 μC = Q1

B) -4 μC = Q2

d = AB = 6 m

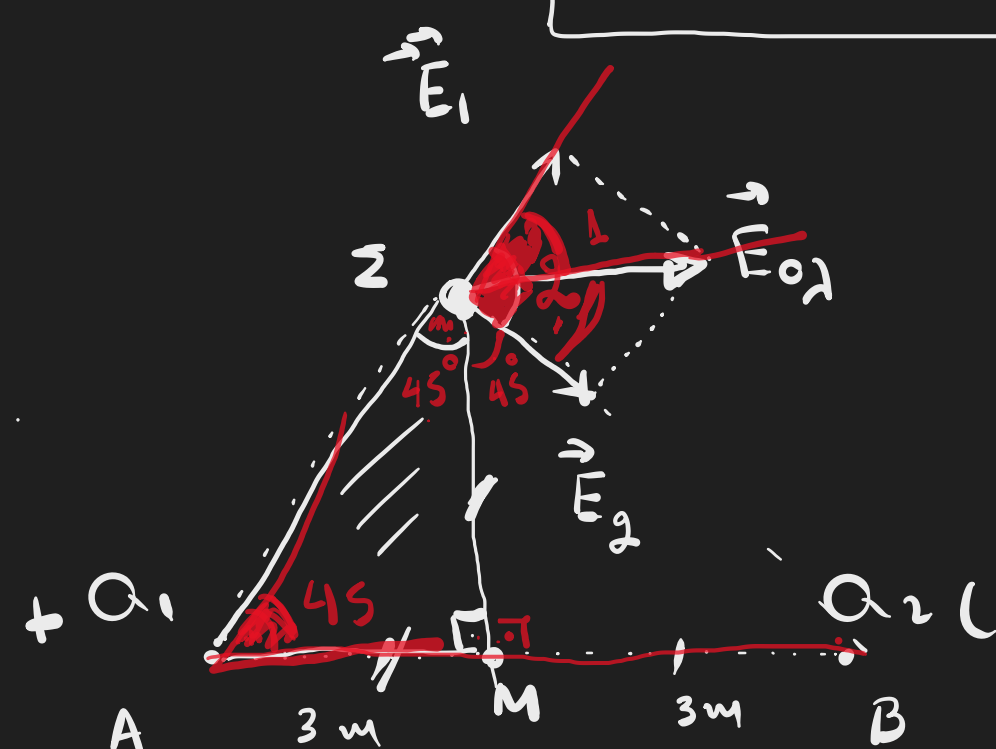
ΣM = 3 m

$$E_1 = k \frac{|Q_1|}{(AZ)^2} \Rightarrow$$

$$E_1 = 9 \cdot 10^9 \frac{4 \cdot 10^{-6}}{9 \cdot 2} = 2 \cdot 10^3 \text{ N/C}$$

$$E_2 = k \frac{|Q_2|}{(BZ)^2} = 2 \cdot 10^3 \text{ N/C}$$

BZ = AZ



$$AZ = \sqrt{AM^2 + MZ^2}$$

$$AZ = \sqrt{3^2 + 3^2}$$

$$AZ = \sqrt{2 \cdot 3^2}$$

$$AZ = 3\sqrt{2} \text{ m}$$



κατεύθυνση του $\vec{E}_{0\lambda}$

$$\epsilon_{\phi\omega} = \frac{E_1}{E_2} = 1$$

$\omega = 45^\circ$

$$E_{0\lambda}^2 = E_1^2 + E_2^2 + 2E_1E_2 \cos \phi$$

$\phi = 90^\circ \Rightarrow \cos \phi = 0$

$$E_{0\lambda}^2 = 2E_1^2 \Rightarrow$$

$$E_{0\lambda} = \sqrt{2}E_1 \Rightarrow$$

$$E_{0\lambda} = 2 \cdot \sqrt{2} \cdot 10^3 \text{ N/C}$$

Μέτρο

15, 16 / 6ηλ. 52

