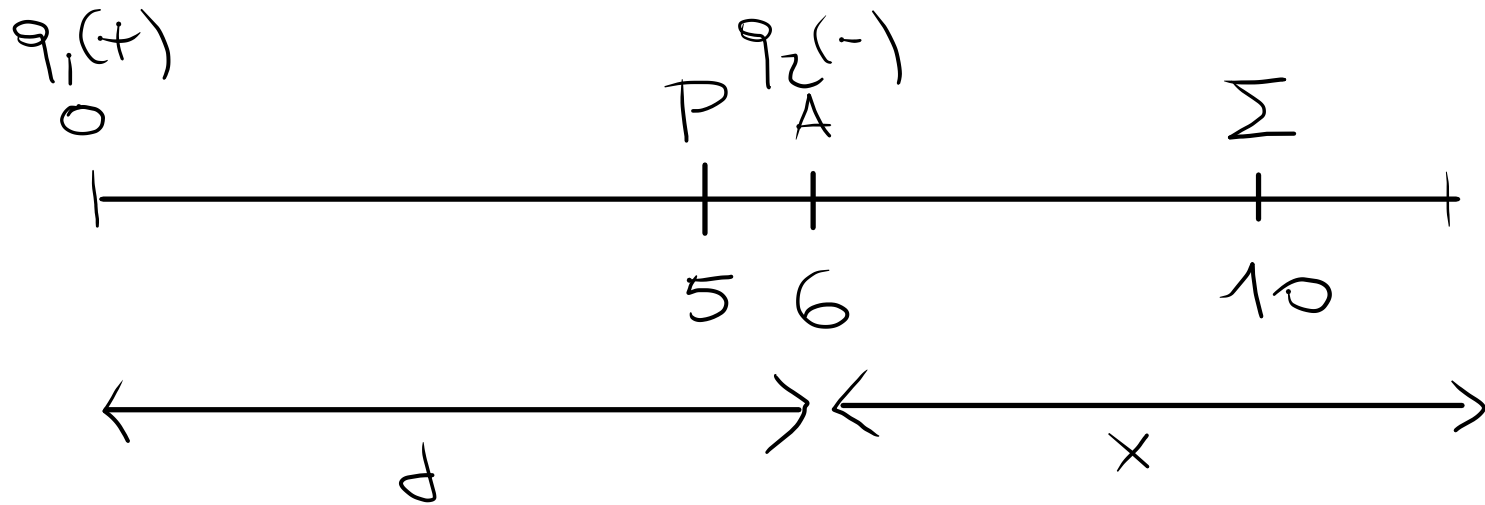


(ΠΑΡΑΔΕΙΓΜΑ 1)



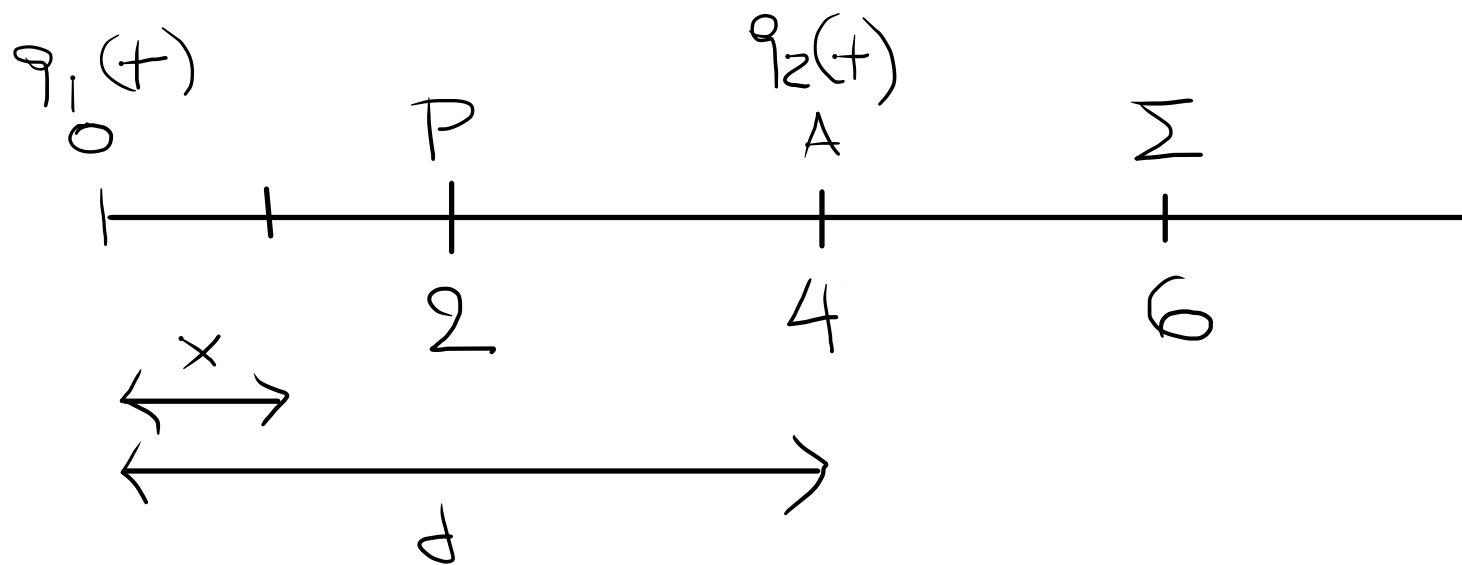
$$q_1 = +25 \cdot 10^{-9} \text{ C} \Rightarrow |q_1| = 25 \cdot 10^{-9} \text{ C}$$

$$q_2 = -16 \cdot 10^{-9} \text{ C} \Rightarrow |q_2| = 16 \cdot 10^{-9} \text{ C}$$

$$d = 4 \text{ m}$$

$$k_{\text{ms}} = 9 \cdot 10^9 \frac{\text{N} \cdot \text{m}^2}{\text{C}^2}$$

(ΠΑΡΑΔΕΙΓΜΑ 2)



$$q_1 = +4 \cdot 10^{-9} \text{ C} \Rightarrow |q_1| = 4 \cdot 10^{-9} \text{ C}$$

$$q_2 = +16 \cdot 10^{-9} \text{ C} \Rightarrow |q_2| = 16 \cdot 10^{-9} \text{ C}$$

$$d = 4 \text{ m}$$

$$k_{\text{ns}} = 9 \cdot 10^9 \frac{\text{N} \cdot \text{m}^2}{\text{C}^2}$$

$$(x) \quad E_1 = 9 \cdot 10^9 \cdot \frac{4 \cdot 10^{-9}}{(4+2)^2} = \dots = 1 \frac{2}{3} (\rightarrow)$$

$$E_2 = 9 \cdot 10^9 \frac{16 \cdot 10^{-9}}{2^2} = \dots = 36 \frac{2}{3} (\rightarrow)$$

$$E = E_1 + E_2 = 37 \frac{2}{3} (\rightarrow)$$

$$(b) \quad E_1 = 9 \cdot 10^9 \frac{4 \cdot 10^{-9}}{2^2} = \dots = 9 \frac{\text{N}}{\text{C}} (\rightarrow)$$

$$E_2 = 9 \cdot 10^9 \frac{16 \cdot 10^{-9}}{(4-2)^2} = \dots = 36 \frac{\text{N}}{\text{C}} (\leftarrow)$$

$$E = E_2 - E_1 = 27 \frac{\text{N}}{\text{C}} (\leftarrow)$$

$$(8) \quad E_1 = E_2$$

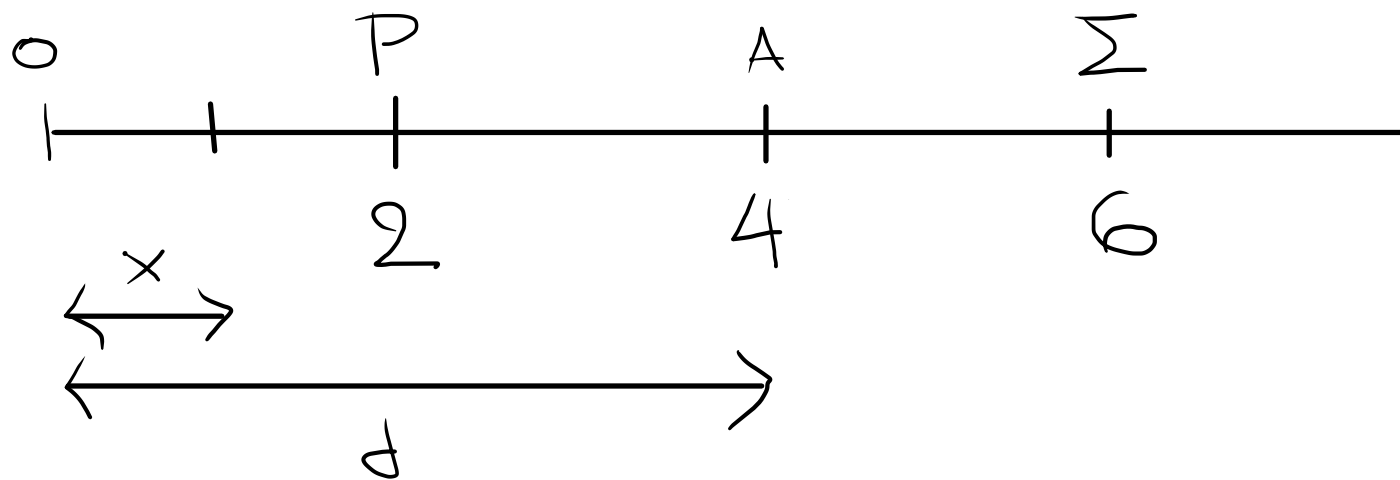
$$\Rightarrow \dots \quad \frac{4}{x^2} = \frac{16}{(4-x)^2}$$

$$\Rightarrow \quad 4(4-x)^2 = 16x^2$$

$$\Rightarrow \quad 2(2-x) = 4x$$

$$\Rightarrow \quad x = \frac{2}{3} \text{ m}$$

(ΠΑΡΑΔΕΙΓΜΑ 1)



(ΠΑΡΑΔΕΙΓΜΑ 1)

