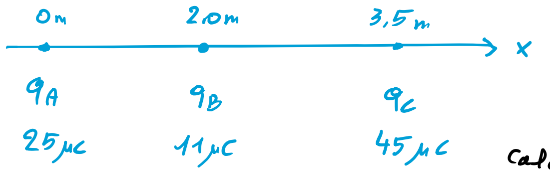
8.8



(a). $\vec{F}_{EB} = \vec{F}_{EA/B} + \vec{F}_{EC/B}$ (! Somme de vecteurs)

Calculs des intensités
$$\begin{cases} F_{EA/B} = k \cdot \dfrac{q_A \cdot q_B}{2{,}0^2} = 0{,}61875\ldots N \quad (+x) \\ F_{EC/B} = k \cdot \dfrac{q_C \cdot q_B}{1{,}5^2} = 1{,}98\,N \quad (-x) \end{cases}$$

$\Rightarrow$ Sur x : $F_{EB} = -1{,}98 + 0{,}618.. = -1{,}36..N$

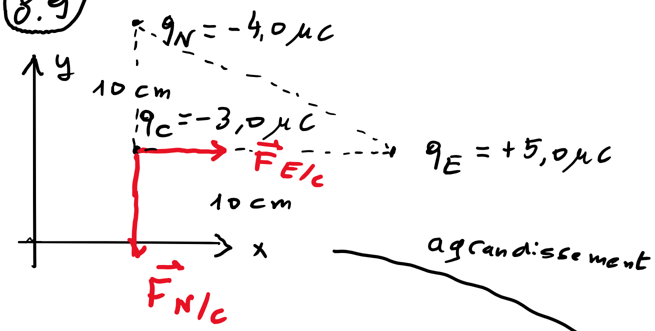
Donc $F_{EB} = \underline{\underline{1{,}4\,N}}$ vers $(-x)$

(b). Les intensités ne changent pas ! • Sur x : $F_{EB} = -0{,}618 + 1{,}98 = 1{,}36\ldots N$

Donc $F_{EB} = \underline{\underline{1{,}4\,N}}$ vers $(+x)$

$\vec{F}_{EB}$ change de direction !

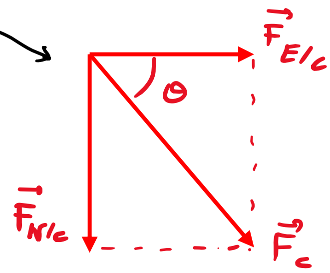
8.9



$\vec{F}_c = \vec{F}_{N/c} + \vec{F}_{E/c}$

$F_{N/c} = k \cdot \dfrac{|q_N \cdot q_c|}{0{,}1^2} = 10{,}8\,N$ (vers $-y$)

$F_{E/c} = k \cdot \dfrac{|q_E \cdot q_c|}{0{,}1^2} = 13{,}5\,N$ (vers $+x$)



$F_E = \left(F_{N/c}^2 + F_{E/c}^2\right)^{1/2} \cong \underline{\underline{17\,N}}$

$\theta = \arctan\left(\dfrac{F_{N/c}}{F_{E/c}}\right) \cong \underline{\underline{39°}}$

39° "au Sud de l'Est"