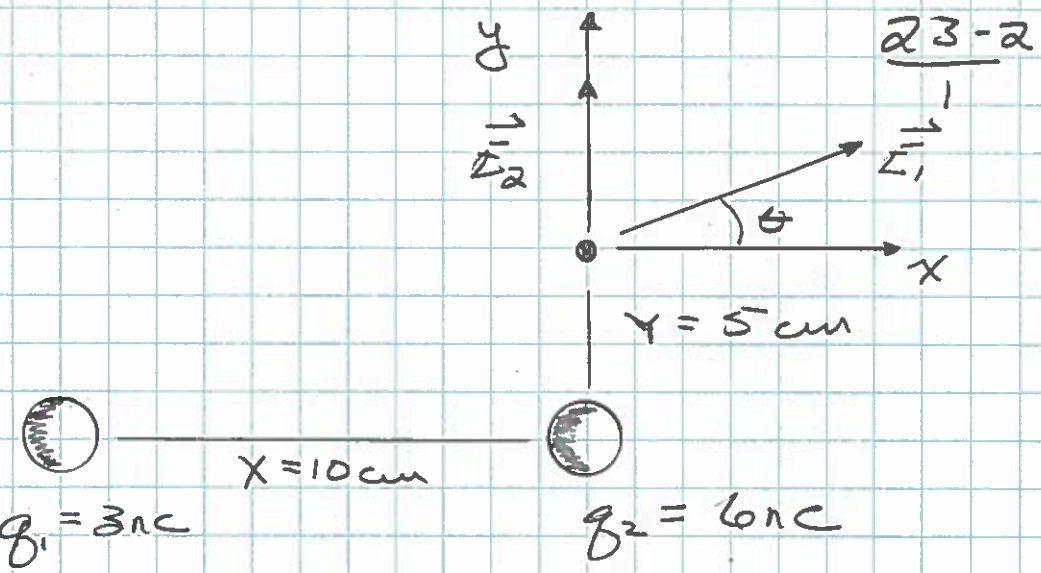


Do $\vec{E}_2$ first: $|\vec{E}_2| = \frac{K|q_2|}{Y^2} = 21576.\ N/C$

and $\vec{E}_2 = 21567\,\hat{j}\ N/C$

Now $\vec{E}_1$: $|\vec{E}_1| = \frac{K|q_1|}{X^2+Y^2} = 2157.6\ N/C$

and, $\vec{E}_1 = |\vec{E}_1|\cos\theta\,\hat{i} + |\vec{E}_1|\sin\theta\,\hat{j}$

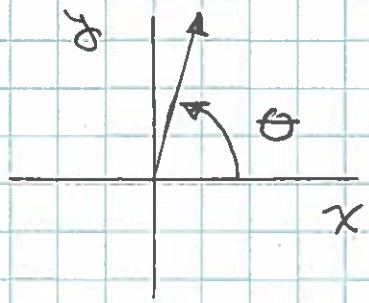
where: $\theta = \tan^{-1}\left(\frac{Y}{X}\right) = 26.56°$

So: $\vec{E}_1 = 1929.9\,\hat{i} + 964.7\,\hat{j}$

Now: $\vec{E}_{Total} = \vec{E}_1 + \vec{E}_2$

$= 1929.9\,\hat{i} + 21576\,\hat{j}\ N/C$

E_T and, $|\vec{E}_{TOTAL}| = \underline{21662\ N/C}$



$\theta = \tan^{-1}\left(\frac{E_{TY}}{E_{TX}}\right) = \underline{85.5°}$