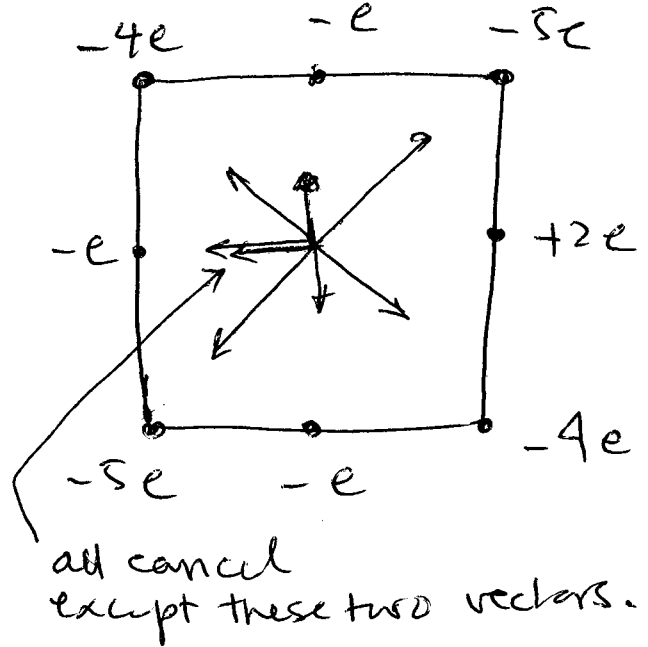
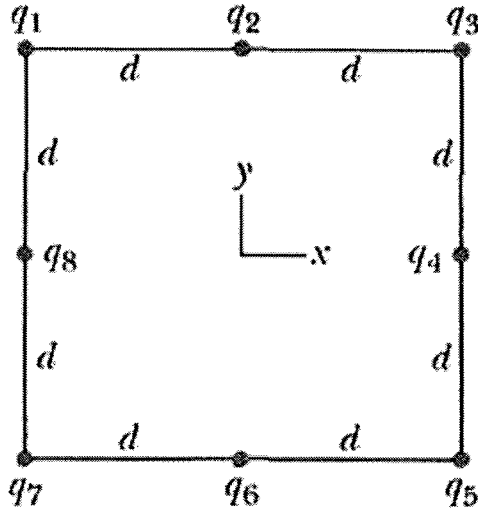


In Figure 1, eight particles form a square in which the distance $d = 4.0$ cm. The charges are $q_1 = -4e$, $q_2 = -e$, $q_3 = -5e$, $q_4 = +2e$, $q_5 = -4e$, $q_6 = -e$, $q_7 = -5e$, and $q_8 = -e$. Using the unit-vector notation, what is the net electric field at the center of the square in units of N/C? (e is the magnitude of the charge of the electron)



$$\vec{E} = -\frac{ke\hat{i}}{d^2} - \frac{2ke\hat{i}}{d^2} = -\frac{3ke\hat{i}}{d^2}$$

$$= \left(-\frac{3 \times 9 \times 10^9 \times 1.6 \times 10^{-19}}{(0.04)^2} \hat{i} \right) \frac{N}{C}$$

$$= (-2.7 \times 10^{-6} \hat{i}) \frac{N}{C}$$

04 Sep	11 Sep	18 Sep	25 Sep	2 Oct	9 Oct	23 Oct	30 Oct	6 Nov	13 Nov	20 Nov	27 Nov	4 Dec	11 Dec	18 Dec
Solutions of the quizzes can be found on the webpage: http://faculty.kfupm.edu.sa/phys/aljalal/phys102.htm														
KFUPM														
Phys102-131														