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pemecahan kasus

Muatan listrik

$$1) N = (5 - 0,8) \cdot \frac{(6,02 \times 10^{23})}{107,9} + 0,8 \cdot \frac{(6,02 \times 10^{23})}{197}$$
$$= 2,34 \times 10^{22} + 2,44 \times 10^{21}$$
$$= 2,58 \times 10^{22}$$

Ag = 47 elektron

Au = 79 elektron

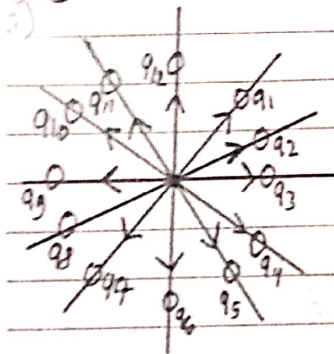
Ag + Au = 126 elektron

jumlah medan total Φ adalah :

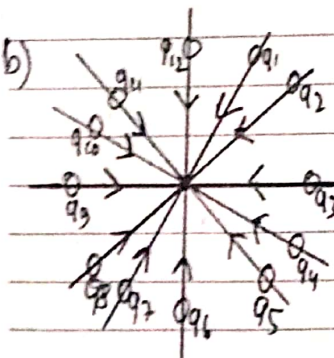
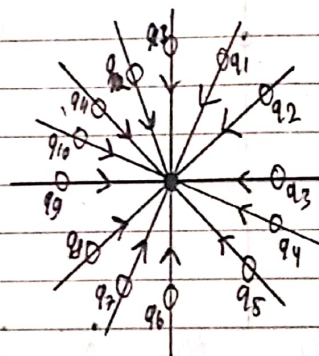
$$\Phi = (2,58 \times 10^{22} \text{ atom}) (126 \text{ elektron}) (1,6 \times 10^{-19} \text{ C / elektron})$$
$$= 5,2 \times 10^5 \text{ C}$$

Jadi, pada cincin Sgr terdapat muatan $5,2 \times 10^5 \text{ C}$, dimana pada cincin Sgr terdapat $\frac{5,2 \times 10^5 \text{ C}}{1,6 \times 10^{-19}} = 3,25 \times 10^{24}$ elektron

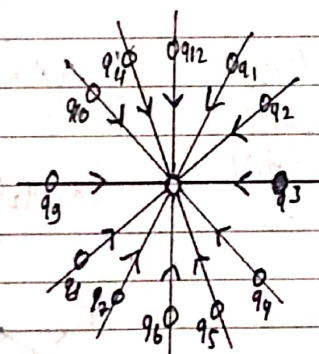
gaya listrik



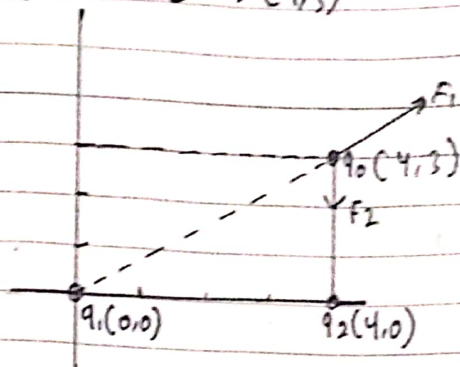
c)



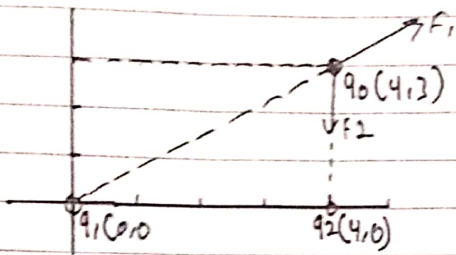
d)



e. $q_1 = 25 \mu C \rightarrow (0,0)$ Carilah gaya total pada q_0 akibat q_1 dan q_2
 $q_2 = -10 \mu C \rightarrow (4,0)$
 $q_0 = 10 \mu C \rightarrow (4,3)$

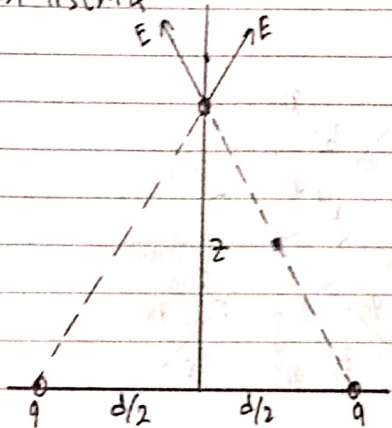


f) $q_1 = +25 \mu C \rightarrow (0,0)$ Carilah gaya pada q_0
 $q_2 = -15 \mu C \rightarrow (4,0)$
 $q_0 = +20 \mu C \rightarrow (4,3)$

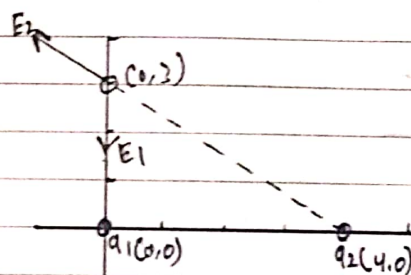


Medan listrik

a)

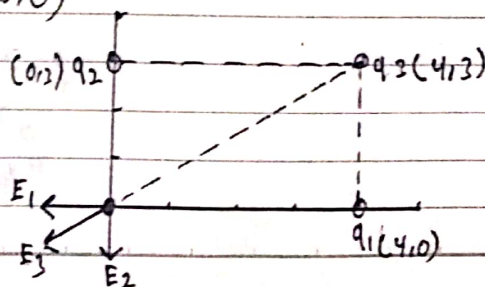


c) $q_1 = -5 \mu C \rightarrow (0,0)$ Hitung medan di $(0,3)$
 $q_2 = 10 \mu C \rightarrow (4,0)$

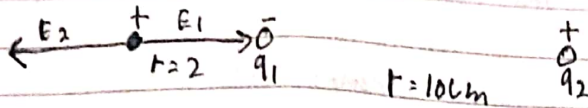


b) $q_1 = 2 \mu C \rightarrow (4,0)$
 $q_2 = 5 \mu C \rightarrow (0,3)$
 $q_3 = 10 \mu C \rightarrow (4,3)$

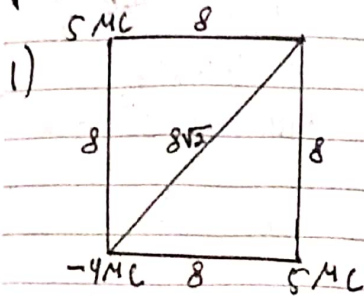
tentukan medan listrik di $(0,0)$



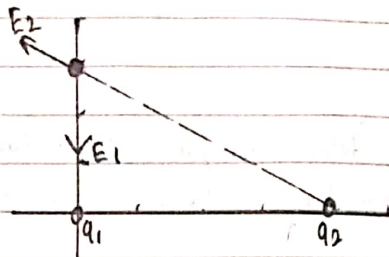
d) $q_1 = -25 \mu C$ besar dan arah medan listrik 2 um
 $q_2 = 50 \mu C$
 $r = 10 \text{ cm}$



potensial listrik



2) $q_1 = -5 \mu C \rightarrow (0,0)$
 $q_2 = 10 \mu C \rightarrow (4,0)$



3) $q_1 = +25 \mu C \rightarrow (0,0)$
 $q_2 = -15 \mu C \rightarrow (4,0)$
 $q_0 = +20 \mu C \rightarrow (4,3)$ Carilah titik $(0,3)$

