Nama : Ade Filla Vannessa
Npm : 2013022020
Kelas : B

1. $N = (5-0{,}8) \cdot \frac{6{,}02 \times 10^{23}}{107{,}9} + 0{,}8 \cdot \frac{6.02 \times 10^{23}}{197}$

$= 4{,}2 \cdot \frac{6{,}02 \times 10^{23}}{107.9} + 0{,}8 \cdot \frac{6{,}02 \times 10^{23}}{197}$

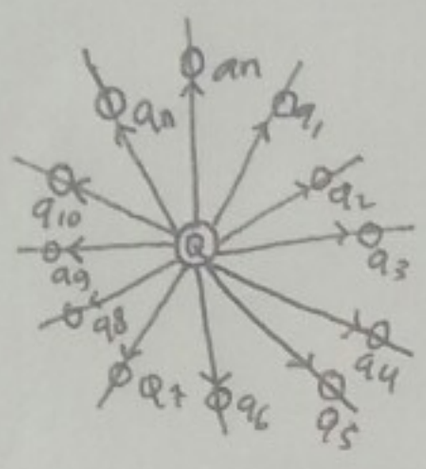
$= 2{,}34 \times 10^{22} + 2{,}44 \times 10^{21}$

$= 2{,}58 \times 10^{22}$

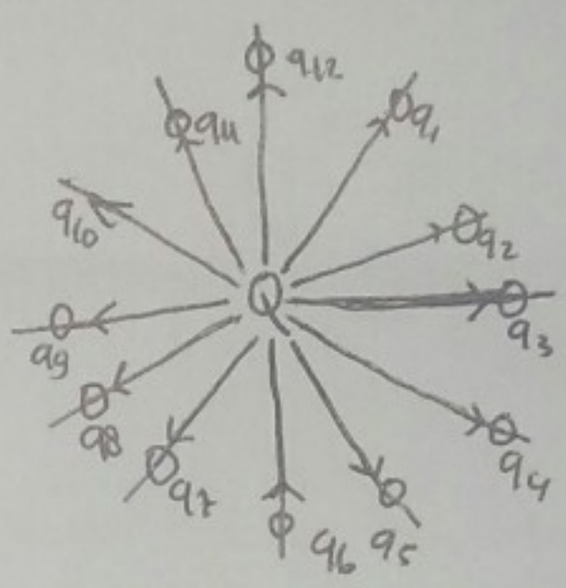
→ Atom Ag mempunyai 47 elektron atom Au mempunyai 79 elektron maka jumlah kedua atom tersebut adalah $47 + 79 = 126$ elektron. Jadi jumlah medan total Q yaitu: Q ($2{,}58 \times 10^{22}$ atom)(126 elektron/atom) ($1{,}60 \times 10^{-19}$ C/elektoron) : $5{,}2 \times 105$ C, Jadi untuk massa cincin 5 gr mempunyai muatan $5{,}2 \times 10^5$ c, hal ini berarti dalam massa cincin 5gr terdapat $\frac{5.2 \times 105}{1{,}6 \times 10^{-19}} = 3{,}25 \times 10^{24}$ elektron

* Kasus Gaya listrik

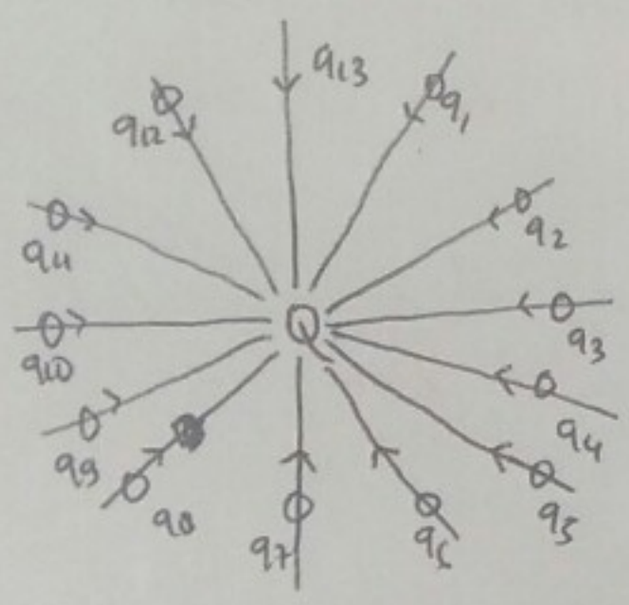
9.



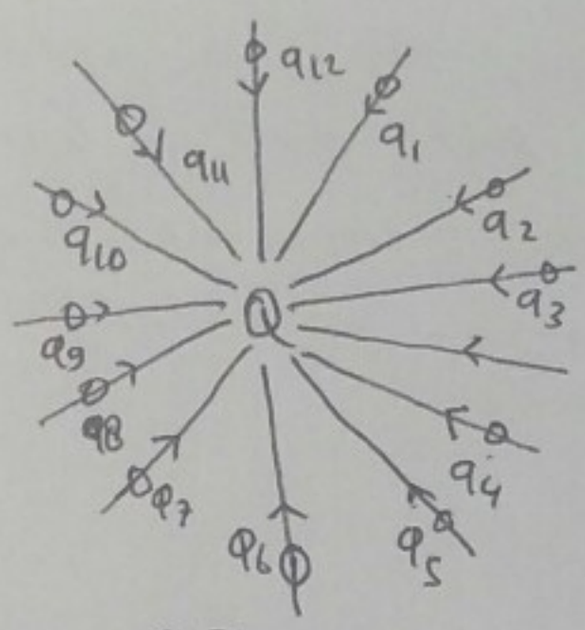
b.



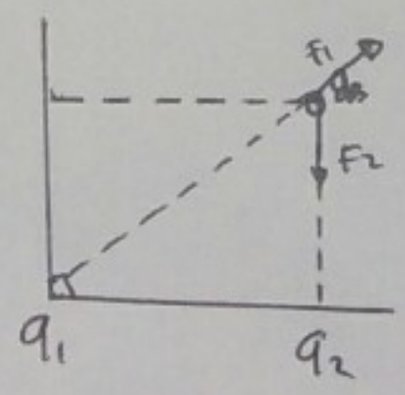
C.



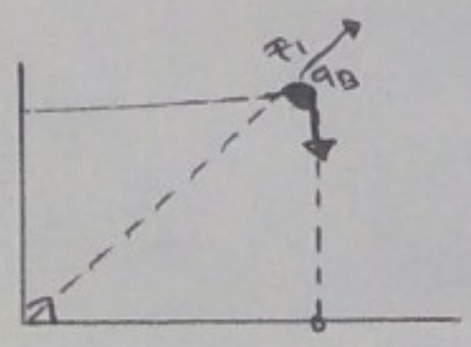
d.



e. $q_1 = 25\ \mu C \rightarrow (0,0)\ m$
$q_2 = -10\ \mu C \rightarrow (4,0)\ m$
$q_B = 10\ \mu C \rightarrow (4,3)\ m$

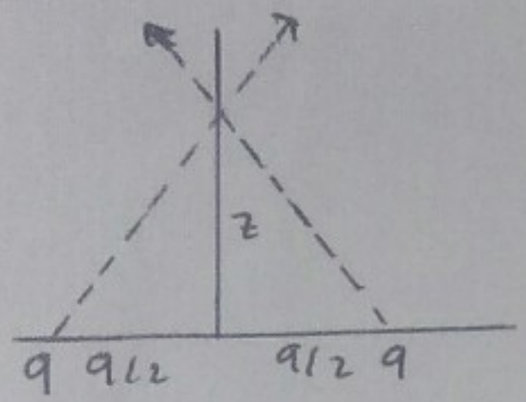


F $q_1 = 25\ \mu C \rightarrow (0,0)$
$q_2 = -15\ \mu C \rightarrow (4,0)$
$q_B = 20\ \mu C \rightarrow (4,3)$



* Kasus Medan Listrik

a.

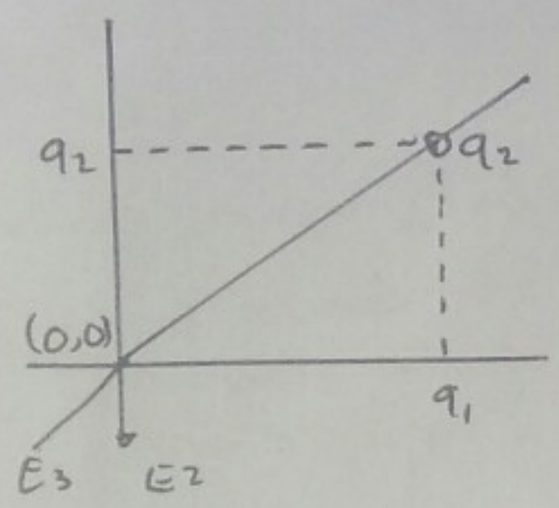


b. q_1 (4,0) = 2C

q_2 (0,3) = 5C

q_3 (4,3) = 10C

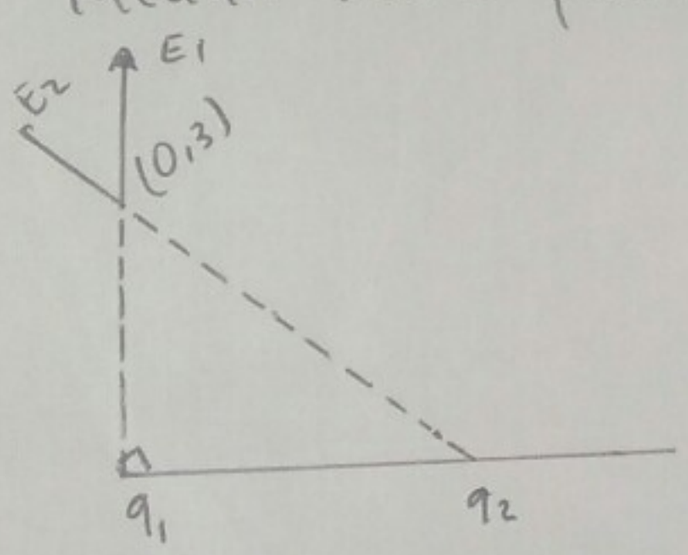
Medan listrik pada posisi (0,0)



c. q_1 (0,0) = -5 uc

q_2 (4,0) = 10 uc

Medan listrik pada posisi (0,3)

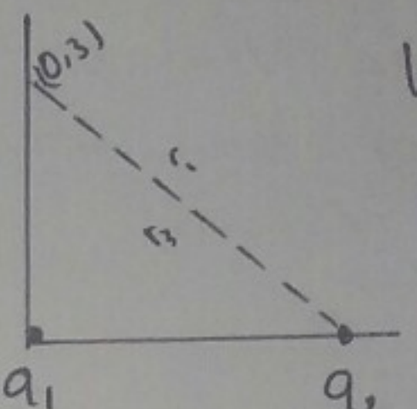


* Potensial listrik

2. q_1(0,0) = -5C

q_2(4,0) = 10uC

Hitung medan listrik titik(0,3)



$$V = \frac{kq_1}{r_1} + \frac{kq_2}{r_2}$$

$$= 9\times10^{6}\left(\frac{5}{3} + \frac{10}{4}\right)$$

$$= 3{,}75\times10^{7}$$