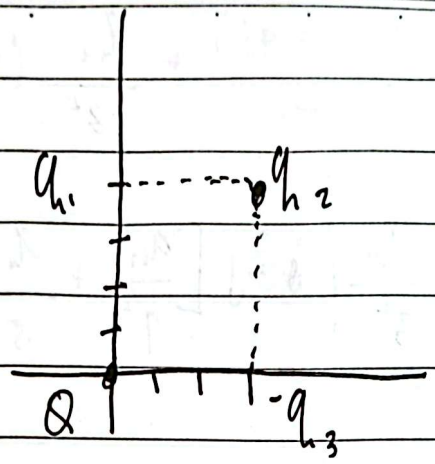
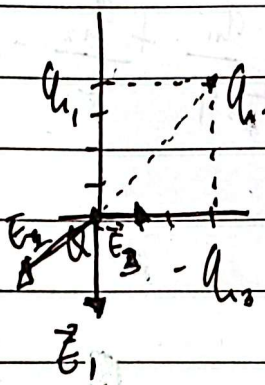
No.

Date:



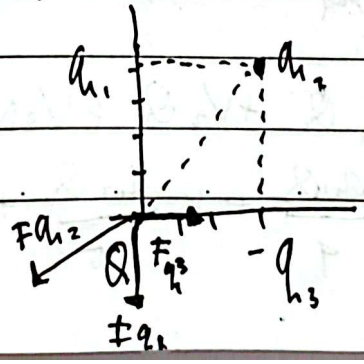
a) hitung medan listrik di titik (0,0)



$$\vec{E}_Q = k\left[\frac{q_1}{4^2}(-\hat{j}) + \frac{q_2}{5^2}\frac{(-4\hat{j}+3\hat{i})}{5} + \frac{q_3}{3^2}(\hat{i})\right]$$

$$\vec{E}_Q = k\left[-(\hat{i})\left[\left(\frac{q_2}{5^2}\cdot\frac{3}{5}\right)+\frac{q_3}{3^2}\right] - \hat{j}\left[\frac{q_1}{4^2}+\left(\frac{q_2}{5^2}\cdot\frac{4}{5}\right)\right]\right]$$

b. hitunglah gaya listrik di titik (0,0)



SiDU

No.

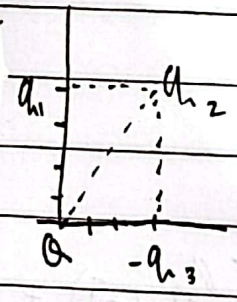
Date:

$$F_Q = kQ\left[\frac{q_1}{q^2}(-j) + \frac{q_2}{5^2}\left(\frac{3i+4j}{5}\right) + \frac{q_3}{3^2}(i)\right]$$

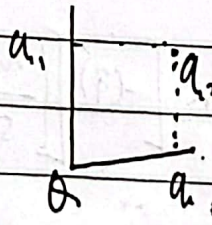
$$F_Q = kQ\left[i\left[\frac{q_2}{5^2}\cdot\frac{3}{5} + \frac{q_3}{3^2}\right] + -j\left[\frac{q_1}{q^2} + \frac{q_2}{5^2}\frac{4}{5}\right]\right]$$

c). Hitung potensial listrik di titik (0,0)

$$V_p = k\left[\frac{q_1}{q} + \frac{q_2}{5} - \frac{q_3}{3}\right]$$



d) Hitung usaha Q memindahkan ke 4 muatan



$$W_Q = V_1 Q + V_2 Q + V_3 Q$$

$$= k\frac{q_1 Q}{q} + k\frac{q_2 Q}{5} + k\frac{q_3 Q}{3}$$

SiBU