Abdul Khoir

1. Terdapat 3 buah muatan yaitu $Q_1 = 20 \mu C$, $Q_2 = -10 \mu C$, $Q_3 = 40 \mu C$ dengan jarak masing masing 60cm

(+)	60cm	(−)	60cm	(+)
Q		Q		Q_3
20mC		-10mC		40mC

Tentukan arah gaya Columb yang bekerja pada muatan [illegible]

Dik: $Q_1 = 20 MC = 2 \times 10^{-4} C$ $\quad R = 60 cm = 0,6 M$

$Q_2 = 10 MC$ $\quad K = 9 \times 10^9$

$Q_3 = 40 MC$

Dt: F_1 dan F_3?

Jwb: $F_3 = k \frac{Q_1 Q_3}{R^2} = 9 \times 10^9 \frac{(20 \times 10^{-6}) \times (40 \times 10^{-6})}{(0,6)^2}$

$= \frac{9 . 20 . 40 \; 10^{-3}}{36 \times 10^{-2}}$

$= 200 . 10^{-1} = 20 N$

$F_{12} = k \frac{Q_1 Q_2}{R^2}$

$= 9 \times 10^9 \frac{20 \times 10^{-6} . 10 \times 10^{-6}}{36 \times 10^{-2}}$

$= \frac{1800 \times 10^{-3}}{36 \times 10^{-2}} = 50 \times 10^{-1} = 5 N$

$F_1 = F_{13} - F_{12}$

$= 20 - 5$

$= 15 N$ kekiri

$F_{32} = \frac{k . Q_3 Q_2}{R^2}$

$= \frac{9 . 40 . 10 \times 10^{-3}}{36 \times 10^{-2}} = 100 . 10^{-1} = 10 N$

$F_3 = F_{31} - F_{32}$

$= 20 N - 10 N$

$= 10 N$ kekiri