

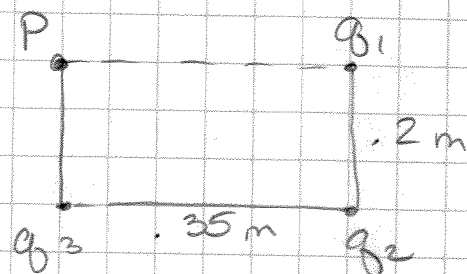
P #12

Ch 16

$$q_1 = -8.00 \mu\text{C} = -8.0 \times 10^{-6} \text{C}$$

$$q_2 = +12.00 \mu\text{C} = +12.0 \times 10^{-6} \text{C}$$

$$q_3 = +8.00 \mu\text{C} = +8.0 \times 10^{-6} \text{C}$$



$$d_1 = 0.35 \text{ m}$$

$$d_3 = 0.20 \text{ m}$$

Find d_2 with Pyth. Th.

$$d_2^2 = d_1^2 + d_3^2$$

$$= (0.35 \text{ m})^2 + (0.20 \text{ m})^2$$

$$d_2 = 0.40 \text{ m}$$

$$V = k_e \cdot \sum \frac{q}{r}$$

$$= (9.0 \times 10^9 \text{ N}\cdot\text{m}^2/\text{C}^2) \cdot \left(\frac{-8 \times 10^{-6} \text{C}}{0.35 \text{ m}} + \frac{+12 \times 10^{-6} \text{C}}{0.40 \text{ m}} + \frac{+8 \times 10^{-6} \text{C}}{0.20 \text{ m}} \right)$$

$$V = 420,000 \text{ V}$$