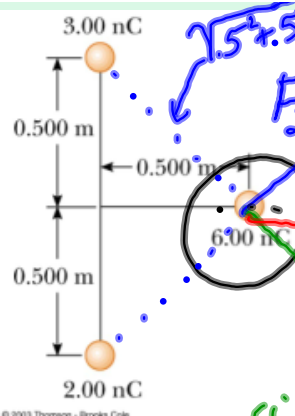


12



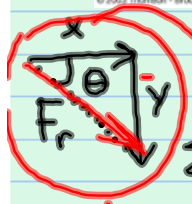
F resultant

$$F = \frac{kq_1q_2}{r^2}$$

① FBD on chg

$$F_{26} = \frac{9 \times 10^9 (6 \times 10^{-9})(2 \times 10^{-9})}{.71^2} = 2.17 \times 10^{-7} \text{ N}$$

$$F_{36} = \frac{9 \times 10^9 (6 \times 10^{-9})(3 \times 10^{-9})}{.71^2} = 3.2 \times 10^{-7} \text{ N}$$



θ = off hori. 2.

$$\Sigma F_x = 2.17 \times 10^{-7} (\cos 45) + 3.2 \times 10^{-7} \cos 45 = 3.75 \times 10^{-7} \text{ N}$$

$$\Sigma F_y = 2.17 \times 10^{-7} \sin 45 - 3.2 \times 10^{-7} \sin 45 = -7.5 \times 10^{-8} \text{ N}$$

$$④ F_r = \sqrt{(3.75 \times 10^{-7})^2 + (7.5 \times 10^{-8})^2} = 3.8 \times 10^{-7} \text{ N}$$

mag dir.

$$\theta = \tan^{-1} \frac{y}{x} = \tan^{-1} \frac{7.5 \times 10^{-8}}{3.75 \times 10^{-7}} = 11.3^\circ$$

$\tan \theta = \frac{\text{opp}}{\text{adj}}$