

P # F.

Ch 16 - Worksheet

$$Q = 9.00 \times 10^{-9} \text{ C}$$

$$q_0 = 3.00 \times 10^{-9} \text{ C}$$

$$r = 30.0 \text{ cm} = .300 \text{ m}$$

$$U_e = \frac{k_e \cdot q_1 \cdot q_2}{r}$$

$$= \frac{(9.0 \times 10^9 \text{ N} \cdot \text{m}^2/\text{C}^2)(9.00 \times 10^{-9} \text{ C})(3.00 \times 10^{-9} \text{ C})}{(.300 \text{ m})}$$

$$W = \Delta U_e = 8.1 \times 10^{-7} \text{ J}$$