

$$m = 6.5 \times 10^{-5} \text{ kg}$$

$$q_1 = 25 \text{ electrons}$$

$$q_2 = +2.0 \text{ } \mu\text{C} = +2.0 \times 10^{-6} \text{ C}$$

$$r = .080 \text{ m}$$

$$a) \quad 25 \text{ electrons} \cdot \frac{-1.6 \times 10^{-19} \text{ C}}{1 \text{ electron}} = -4.0 \times 10^{-18} \text{ C}$$

$$b) \quad F_e = \frac{k_e \cdot q_1 \cdot q_2}{r^2} = \frac{(9 \times 10^9 \text{ N} \cdot \text{m}^2/\text{C}^2)(-4.0 \times 10^{-18} \text{ C})(+2.0 \times 10^{-6} \text{ C})}{(.080 \text{ m})^2}$$

$$F_e = 1.13 \times 10^{-11} \text{ N}$$

Attract

$$c) \quad F = m \cdot a$$

$$(1.13 \times 10^{-11} \text{ N}) = (6.5 \times 10^{-5} \text{ kg}) \cdot a$$

$$a = 1.73 \times 10^{-7} \text{ m/s}^2$$