Final Jeopardy Answer

$$F_e = W_{eight}$$

$$\frac{kq^2}{d^2} = mg$$

$$kq^2 = mgd^2$$

$$q^2 = \frac{mgd^2}{k}$$

$$q = \sqrt{\frac{mgd^2}{k}}$$

$$q = \sqrt{\frac{(0.001kg)(9.8\ \frac{m}{s^2})(0.15m)^2}{9 \times 10^9 \frac{Nm^2}{C^2}}}$$

$$q = 1.565 \times 10^{-7} C\ or\ 0.1565\mu C$$