

39. Coulomb's law gives

$$F = \frac{|q| \cdot |q|}{4\pi\epsilon_0 r^2} = \frac{k(e/3)^2}{r^2} = \frac{\left(8.99 \times 10^9 \frac{\text{N}\cdot\text{m}^2}{\text{C}^2}\right) (1.60 \times 10^{-19} \text{ C})^2}{9(2.6 \times 10^{-15} \text{ m})^2} = 3.8 \text{ N} .$$