

2. The magnitude of the mutual force of attraction at $r = 0.120$ m is

$$F = k \frac{|q_1||q_2|}{r^2} = (8.99 \times 10^9) \frac{(3.00 \times 10^{-6})(1.50 \times 10^{-6})}{0.120^2} = 2.81 \text{ N} .$$