

Classwork 5-13

1. Find the electric force between an alpha particle & an electron that are 2.0 cm apart ($2.0 \times 10^{-2} \text{ m}$). Is the force attractive or repulsive?

$$\text{alpha particle charge} = 3.2 \times 10^{-19} \text{ C}$$

$$\text{electron charge} = -1.6 \times 10^{-19} \text{ C}$$

$$\text{Coulomb's constant } k = \del{8.99 \times 10^9} \\ 8.99 \times 10^9 \frac{\text{Nm}^2}{\text{C}^2}$$

$$\text{Coulomb's law } F_e = \frac{k q_1 q_2}{r^2}$$