

Question 24862

The expression for Coulomb force is $|F| = \frac{k q_1 q_2}{R^2}$, where $k = 8.988 \cdot 10^9 \text{ N m}^2 \text{ C}^{-2}$,

$R = 1.5 \text{ m}$, $q = 3 \text{ C}$. Plugging in these values into this formula, obtain:

$$|F| = \frac{8.988 \cdot 10^9 \text{ N m}^2 \text{ C}^{-2} \cdot 3 \text{ C} \cdot 3 \text{ C}}{(1.5)^2 \text{ m}^2} = 3.6 \cdot 10^{10} \text{ N}.$$