

Electric Charge

q = electric charge, that which creates electric force of attraction or repulsion

unit = 1 coulomb or 1 C

$$k = 8.988 \times 10^{-9} \text{Nm}^2/\text{C}^2$$

Electric

$$|\vec{F}_{\text{electric}}| = \frac{k|q_1||q_2|}{r^2}$$

$\vec{F}_{\text{electric}}$ is conservative

$$\frac{kQq_1}{x^2} = \frac{kQq_2}{(2-x)^2}$$

$$q_1(2-x)^2 = x^2q_2^2$$

$$(q_1 - q_2)x^2 - 4q_1x + 4q_1 = 0$$

$$x =$$