

Like charges repel, opposite charges attract.

This means that charged objects exert forces on other charged objects.

Charges exert forces on each other.

Force depends on charge:

as the amount of charge increases, the amount of force exerted also increases. (Direct proportion).

Force depends on distance:

as the distance decreases, the force increases as a function of the square of the distance.

$$F = K \frac{q_1 q_2}{d^2}$$

$q_1$  = charge of object #1

$q_2$  = charge of object #2

$d$  = distance between  $q_1$  and  $q_2$

$K$  is a constant called Coulomb's constant

$$K = 9.0 \times 10^9 \frac{\text{N} \cdot \text{m}^2}{\text{C}^2}$$

$C$  = coulombs

the unit of measure for charge

1 Coulomb is the charge on  $6.24 \times 10^{18}$  electrons