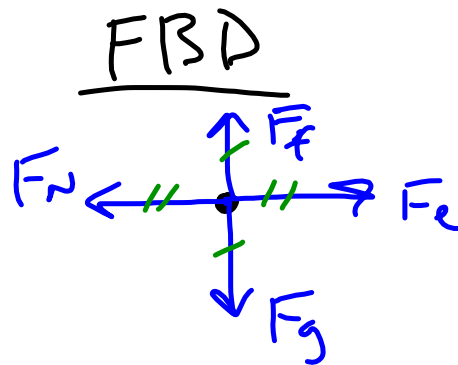


ELECTROSTATICS



Factors that affect electric force:

- charge of object 1
- charge of object 2
- distance between the objects

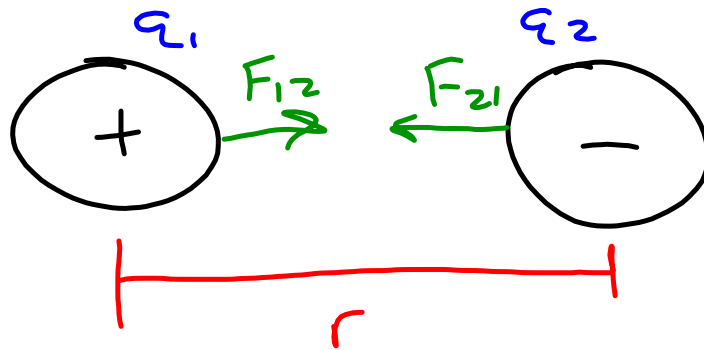
$$F_e = \frac{k q_1 q_2}{r^2}$$

$F_e \rightarrow$ electric force [N]

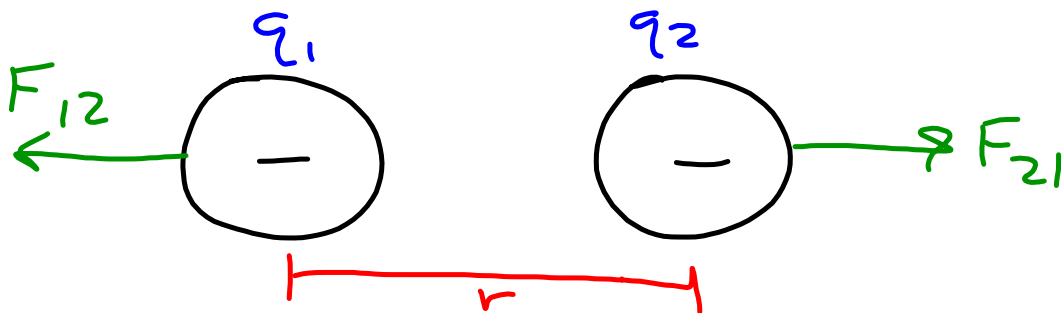
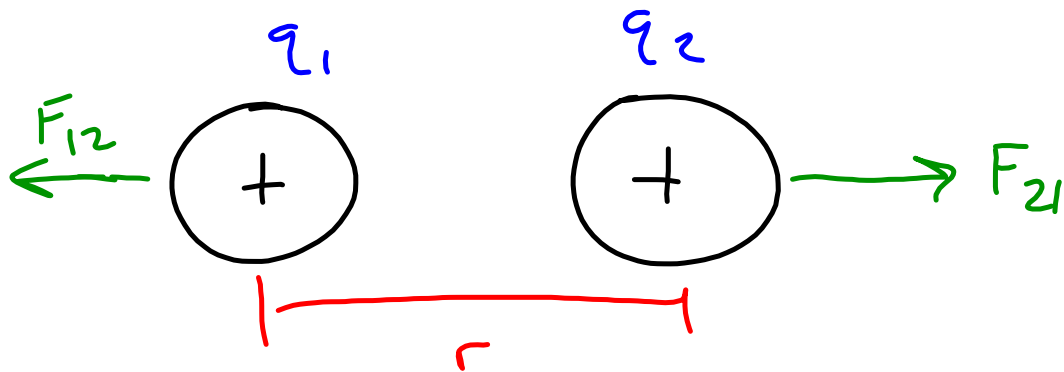
$k \rightarrow$ Coulomb's constant $\left[\frac{N \cdot m^2}{C^2}\right]$
 $9 E 9 \frac{N \cdot m^2}{C^2}$

$q \rightarrow$ charge [C]

Equation is known as Coulomb's Law



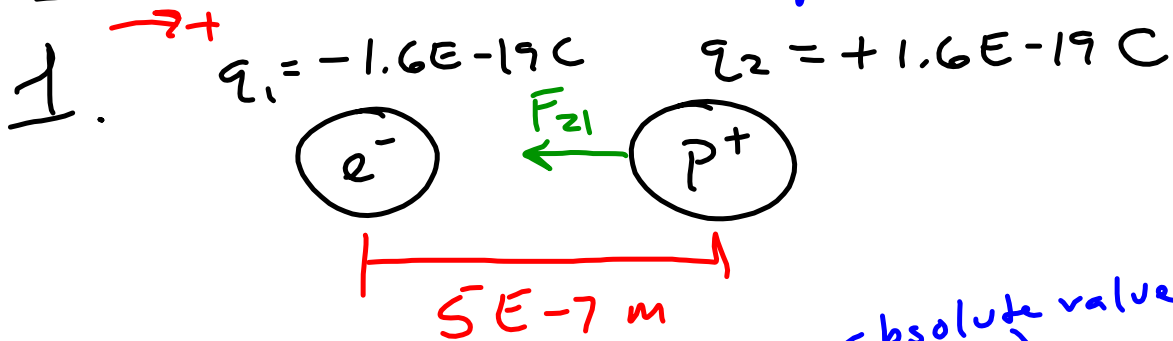
F_{12} → force on object 1 by object 2



Coulomb's Law PS

$$h = 10^{-9}$$

$$\mu = 10^{-6}$$



$$\vec{F}_e = \frac{k q_1 q_2}{r^2} = \frac{k |q_1| |q_2|}{r^2}$$

absolute value

$$= \frac{(9E9 \frac{N \cdot m^2}{C^2})(1.6E-19 C)(1.6E-19 C)}{(5E-7 m)^2}$$

$$= 9.22E-16 N \text{ left}$$