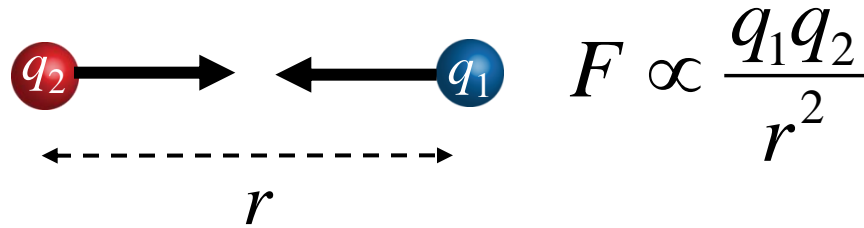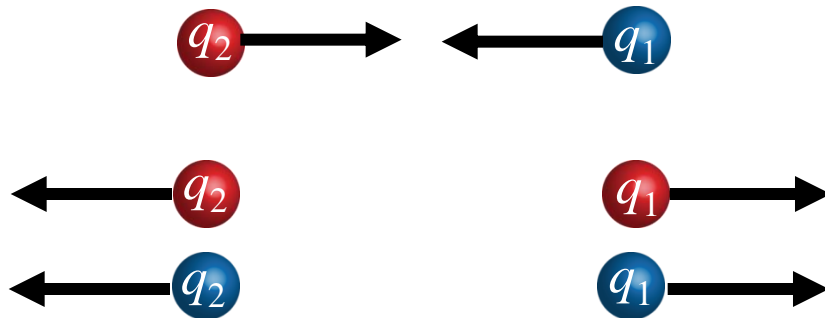# Coulomb's Law:

The force on a charge due to another charge is proportional to the product of the charges and inversely proportional to the separation squared.

Why is the force inversely related to the square of the distance?

$$F \propto \frac{q_1 q_2}{r^2}$$

The force is always parallel to a line connecting the charges, but the direction depends on the signs of the charges:

Opposite signs attract

Like signs repel