

# Example: Coulomb Force



Two paperclips are separated by 3 meters. Then you remove 1 electron from each atom on the first paperclip and place it on the second one.

$$\vec{F} = k \frac{q_1 q_2}{r_{12}^2} \hat{r}_{12}$$

$$k = 9 \times 10^9 \text{ N m}^2 / \text{C}^2$$

$$\text{electron charge} = 1.6 \times 10^{-19} \text{ Coulombs}$$

$$N_A = 6.02 \times 10^{23}$$

What will the direction of the force be?

A) Attractive

B) Repulsive