

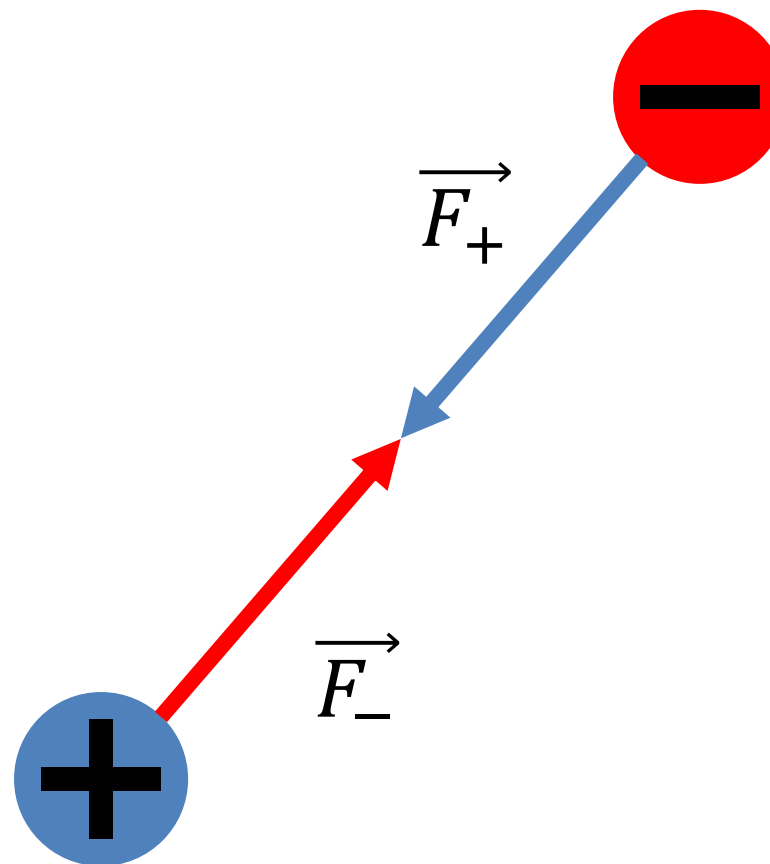
# Força Elétrica: Sistema de cargas elétricas

**Prof. Double**  
Física

## Lei de Coulomb:

$$F_e = k \frac{|Q_1| \cdot |Q_2|}{d^2}$$

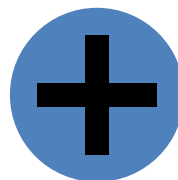
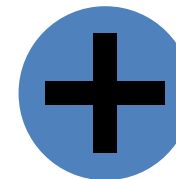
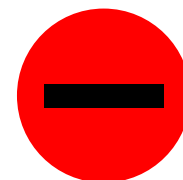
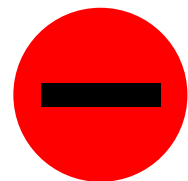
- Ela age em pares!



# Sistema de cargas

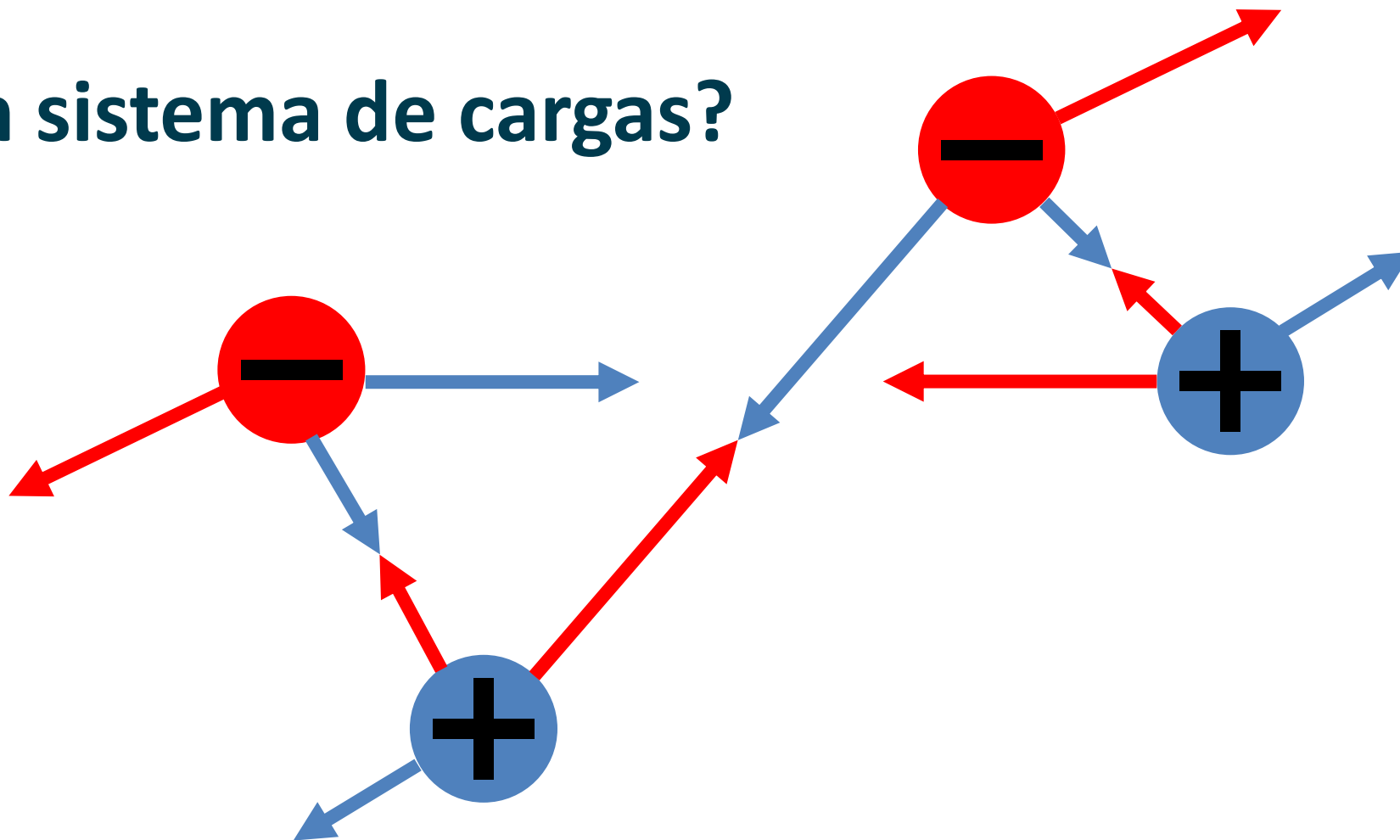
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E para um sistema de cargas?

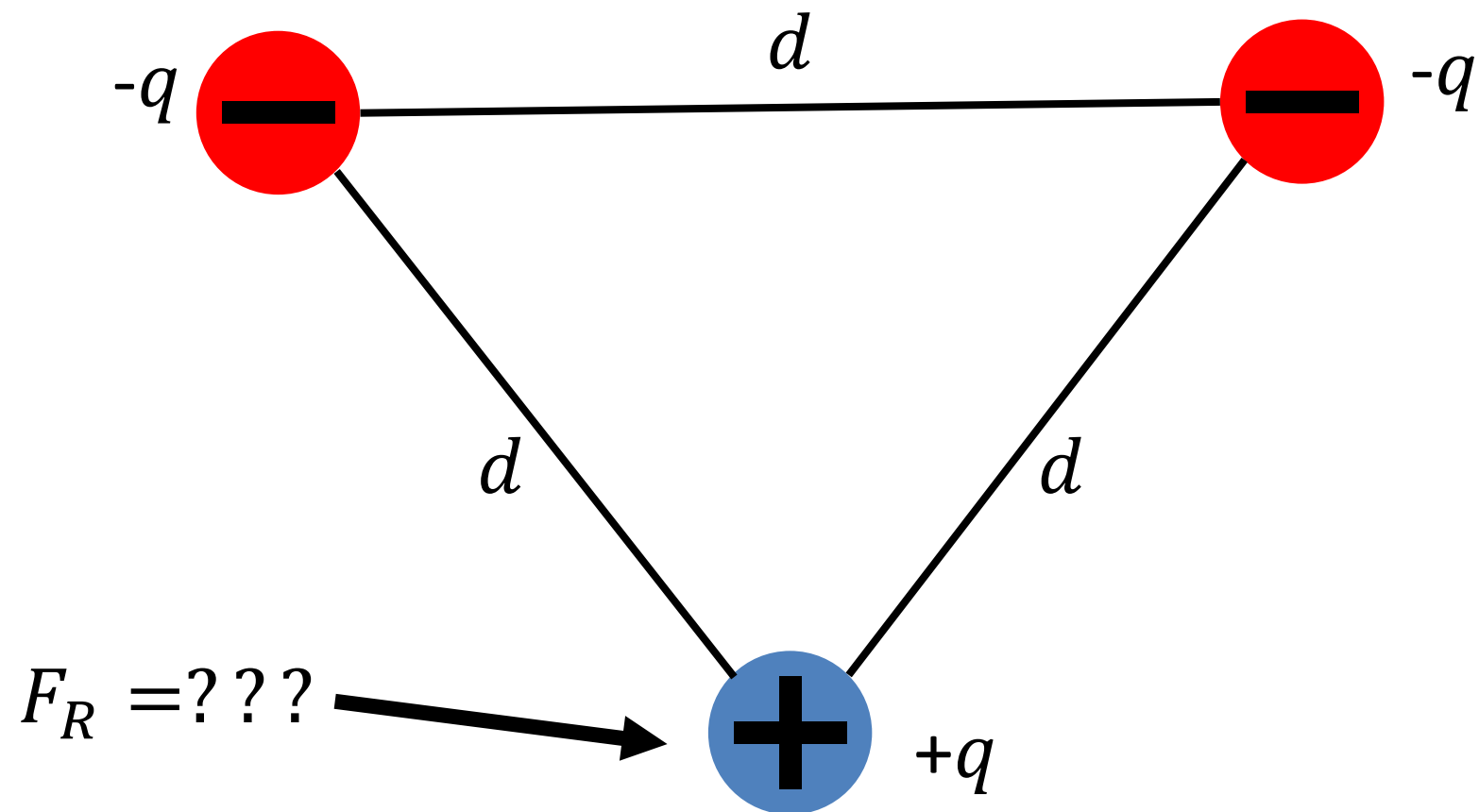


# Sistema de cargas

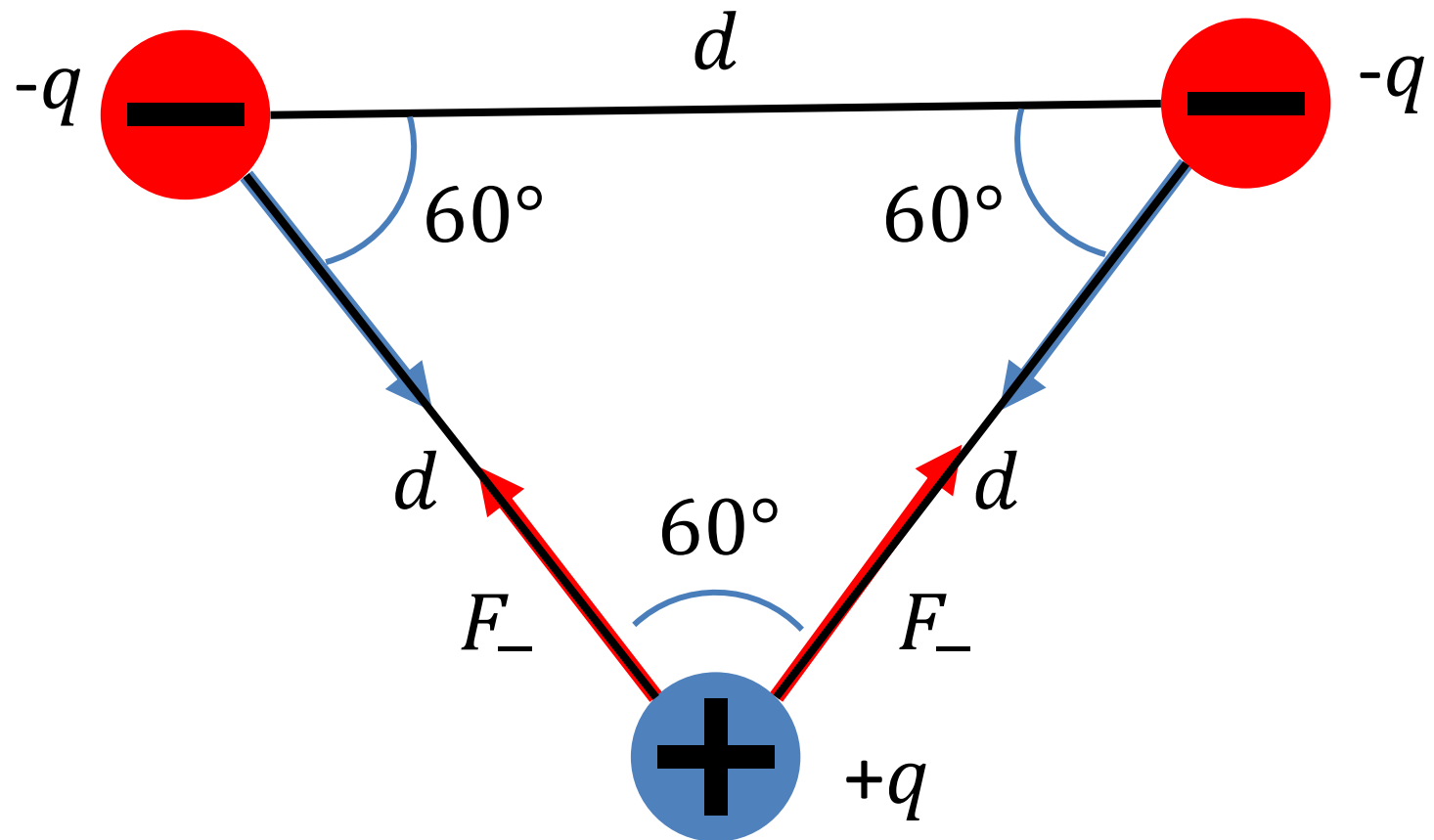
E para um sistema de cargas?



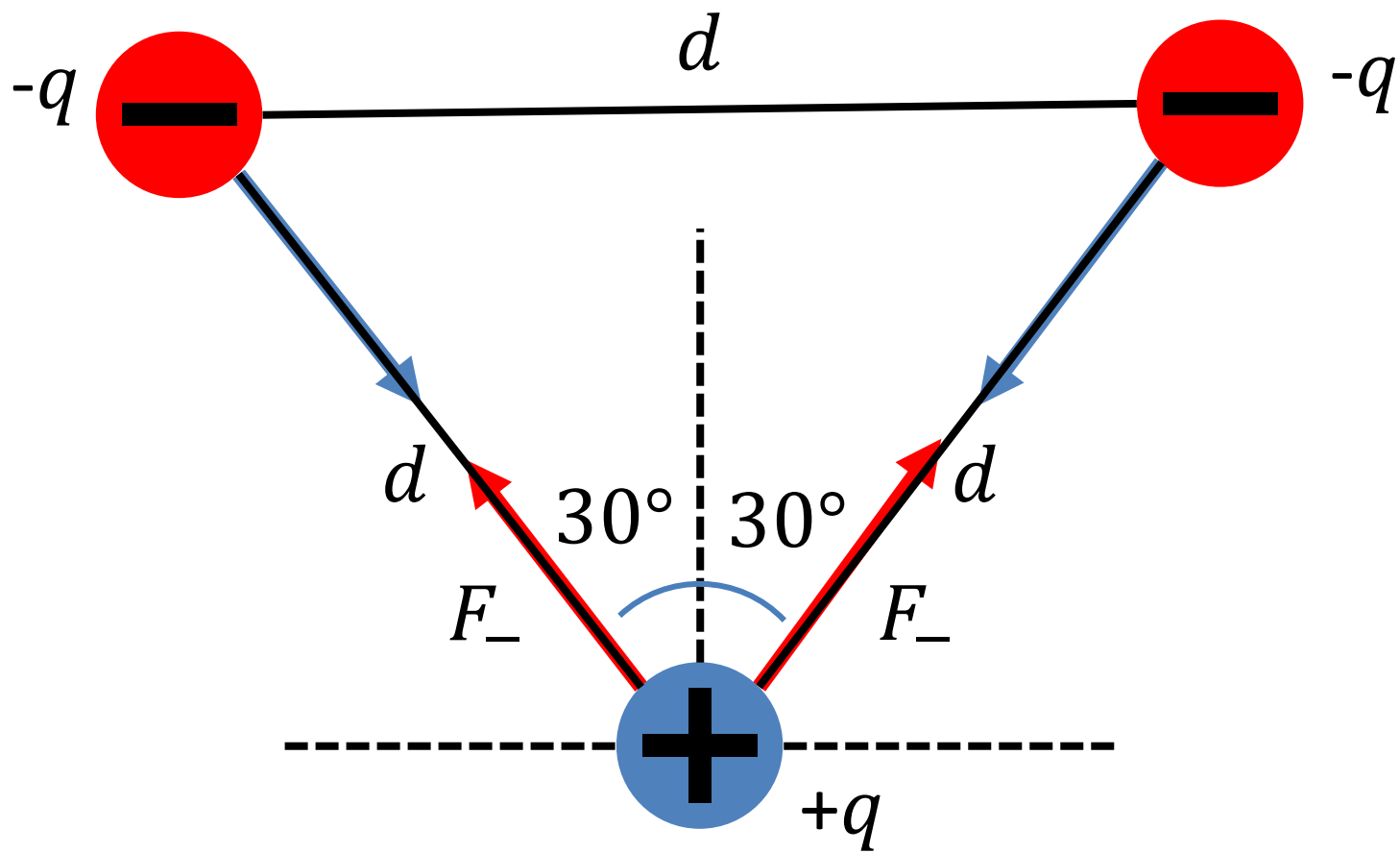
# Sistema de cargas



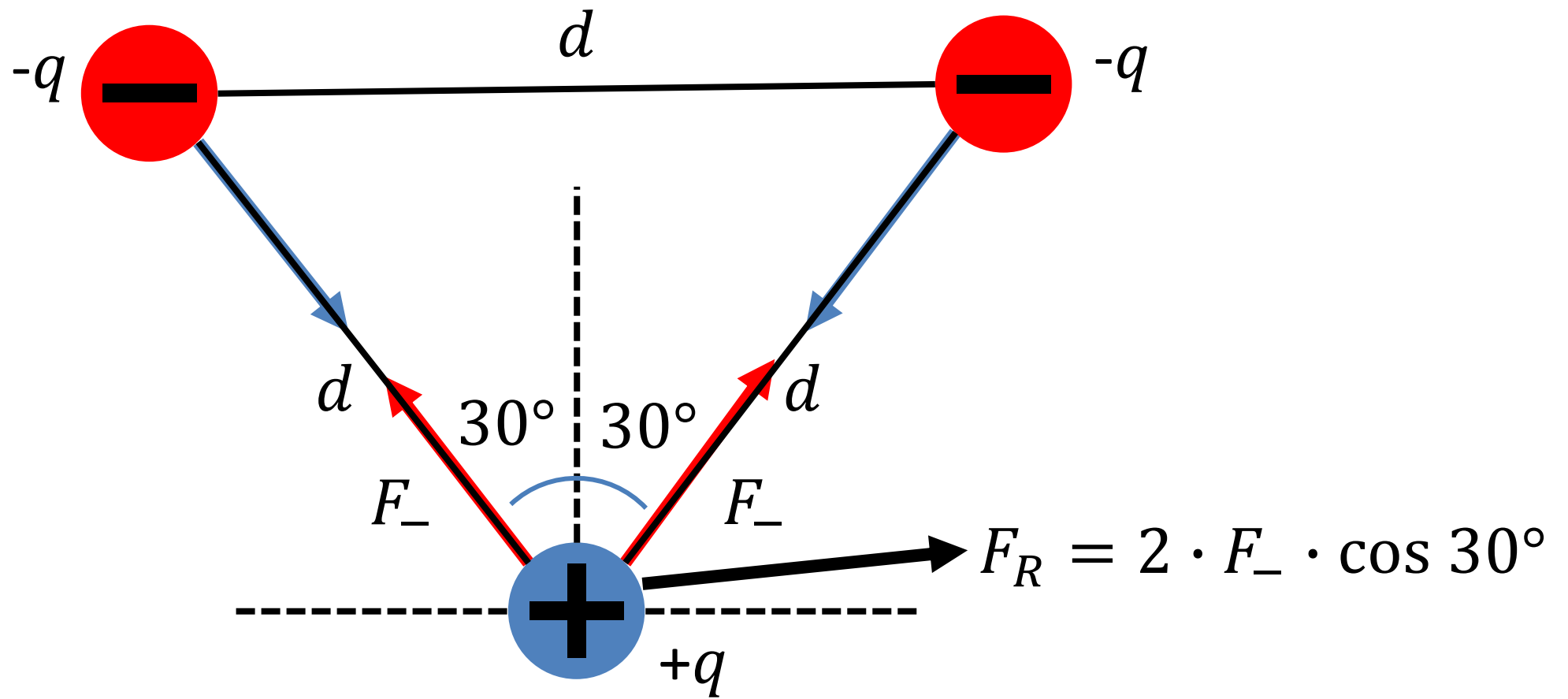
# Sistema de cargas



# Sistema de cargas

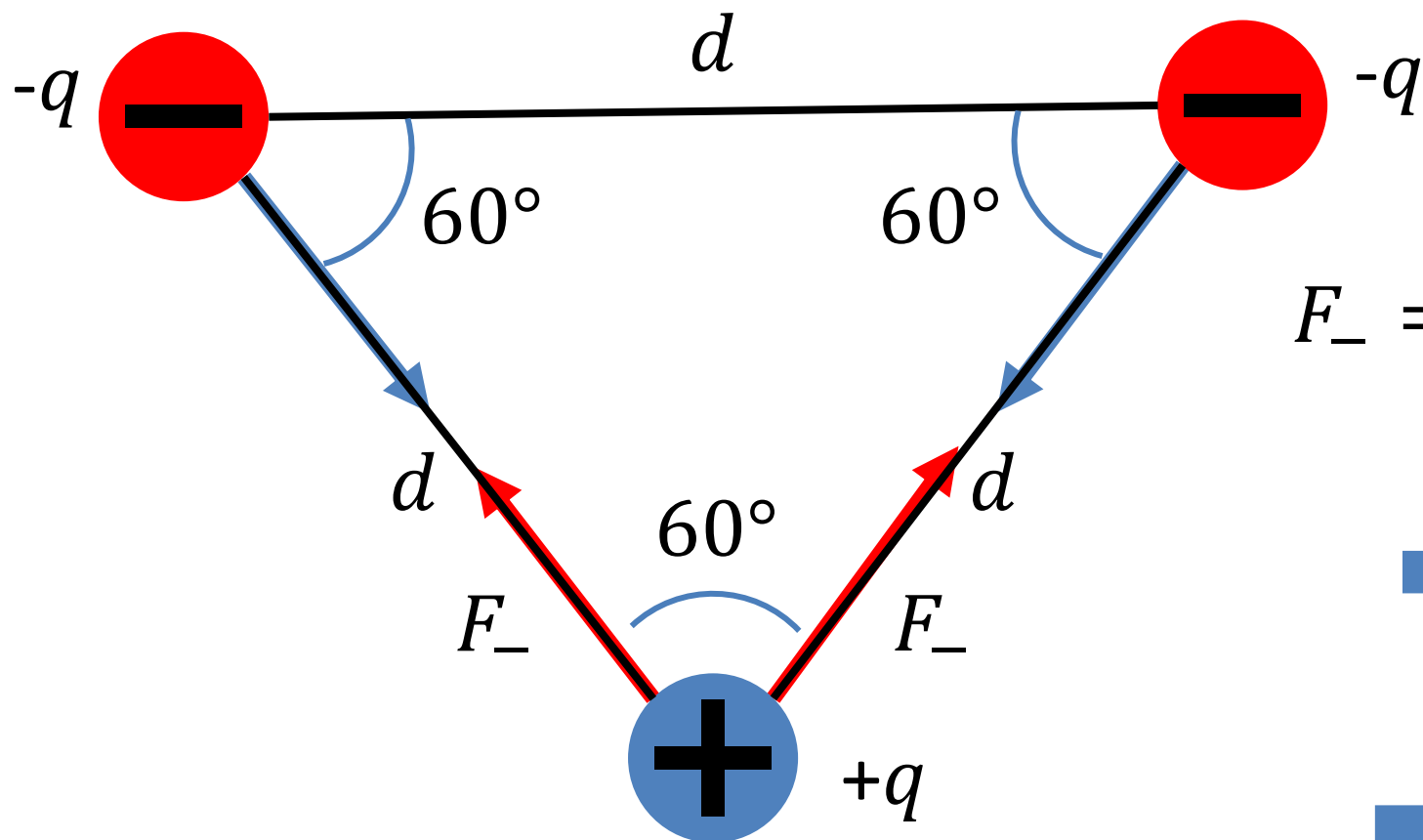


# Sistema de cargas





# Sistema de cargas



$$\rightarrow F_R = 2 \cdot F_- \cdot \cos 30^\circ$$

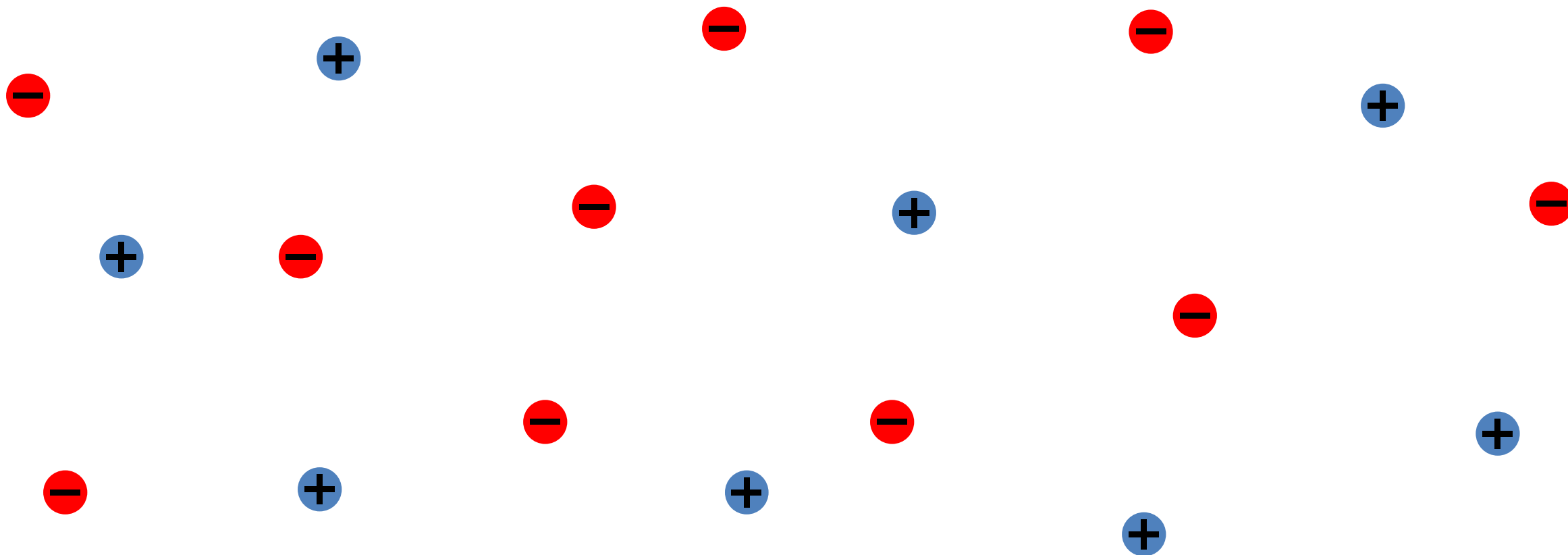
$$F_- = k \frac{|-q||+q|}{d^2} \Rightarrow F_- = k \frac{q^2}{d^2}$$

$$\rightarrow F_R = 2 \cdot k \frac{q^2}{d^2} \cdot \frac{\sqrt{3}}{2}$$

$$\rightarrow F_R = k \frac{q^2}{d^2} \sqrt{3}$$

# Sistema de cargas

Pensem na dificuldade de uma situação real!



Pensem na dificuldade de uma situação real!

# Métodos Computacionais!

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