$$F = \frac{Kq_1q_2}{d^2} \quad K = 9.0 \times 10^9 \frac{Nm^2}{C^2} \qquad \textbf{1 ц C = 10^{-6} C}$$

Coulomb's Law Problem Set 2

1. A sphere carrying a charge of + 2.5 ц C is placed 0.25m from a sphere carrying a charge of - 0.50 цC. What is the force between the two spheres? *(0.18 N)*

2. Two equally charged spheres that exert a force on each other of 0.900 N when separated by a distance of 0.65m. What is the magnitude of the two charges? *(6.5 ц C)*

3. A charge of 8.0 x 10^{-6} C is attracted by a second charge with a 0.350 N force when the separation between them is 0.15m. Calculate the magnitude of the second charge *(0.11 ц C)*

4. What is the distance between two spheres, one with a charge of 3.5 x 10^{-6} C and the other with a charge of 5.5 x 10^{-6} C, when the force between them is 0.025 N? *(2.6 m)*