Coulomb's Law Name _____

Part A: Coulomb's Law

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

Symbol	**Quantity**	**SI Unit**
F_E	Electrostatic Force	Newtons
k	Coulomb's Constant 9.0×10^9 N m^2 / C^2	N m^2 / C^2
q_1	Charge 1	Coulombs (C)
q_2	Charge 2	Coulombs (C)
r	Distance between charges	Meters (m)

Charge	**Attractive or Repulsive?**
Positive and Positive	Repulsive
Negative and Negative	Repulsive
Positive and Negative	Attractive

Coulomb's Law Name _____

1. A charge of positive two coulombs is located 0.5 meters from a charge of positive three Coulombs. What is the force between them? Is the force attractive or repulsive?

Looking for	Formula	
Already Know		
Answer in a complete sentence *with unit*:		

2. A charge of positive three Coulombs is located 0.6 meters from a charge of negative four Coulombs. What is the force between them? Is the force attractive or repulsive?

Looking for	Formula	
Already Know		
Answer in a complete sentence *with unit*:		

3. Look back at your answers to **1.** and **2.** Do these look like large forces or small forces?

5. An electron is separated by a distance of 2 angstrom from a nucleus, which contains 3 protons and two neutrons. What is the force between them? Is that force attractive or repulsive?

Looking for	Formula	
Already Know		
Answer in a complete sentence *with unit*:		

6. An electron is separated by a distance of 12 angstrom from a nucleus, which contains 92 protons and 146 neutrons. What is the force between them? Is that force attractive or repulsive?

Looking for	Formula	
Already Know		
Answer in a complete sentence *with unit*:		