Name: Period: Date:

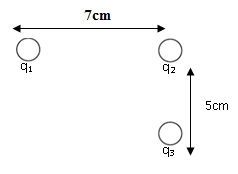
**Electrostatics: Electric charges and Coulomb’s Law Quiz**



I. Answer the following problems. Show all the work to get full credit.

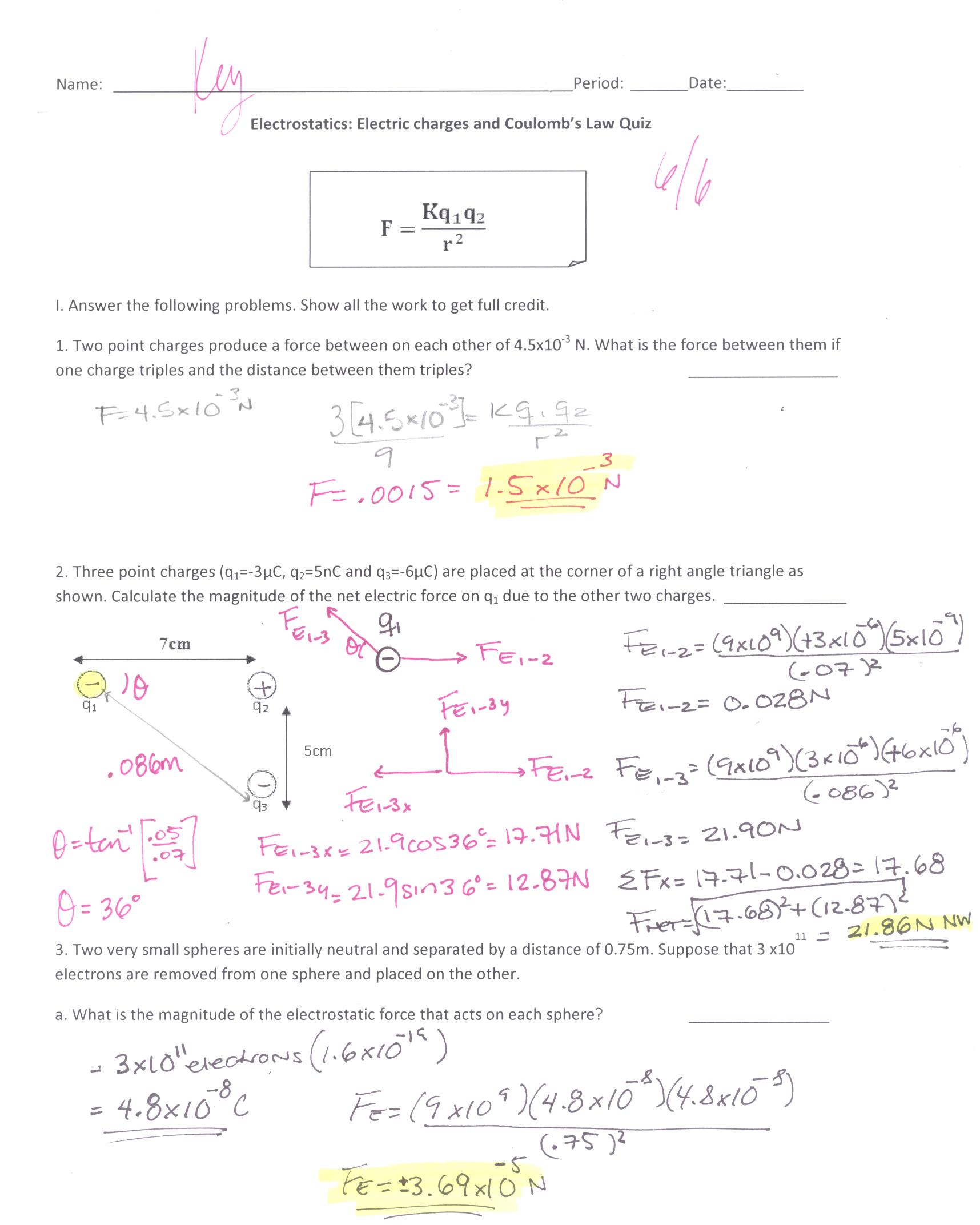
1. Two point charges produce a force between on each other of 4.5x10-3 N. What is the force between them if one charge triples and the distance between them triples? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Three point charges (q1=-3µC, q2=5nC and q3=-6µC) are placed at the corner of a right angle triangle as shown. Calculate the magnitude of the net electric force on q1 due to the other two charges. \_\_\_\_\_\_\_\_\_\_\_\_\_\_



3. Two very small spheres are initially neutral and separated by a distance of 0.75m. Suppose that 3 x1011 electrons are removed from one sphere and placed on the other.

a. What is the magnitude of the electrostatic force that acts on each sphere? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

****