Electrostatics Quiz

1) How far apart are two point charges of 2.0x10-6 C and 4.0x10-6 C if they produce an electric force of 0.56 N?

3.0x10-6 C

4.0x10-6 C

4.0x10-6 C

0.60 m

0.60 m

X

2) Three point charges are placed at the corner of a right angle triangle as shown. Calculate the magnitude of the net electric force on the object marked X due to the other two charges.

3) At a point a short distance from a 4.60x10-6 C charged object, there is an electric field strength of 2.75x105 N/C. What is the distance to the charged object producing this field?

4) What is the initial acceleration of an alpha particle when it is placed at a point in space where the electric field strength is 7.60x104 N/C?

5) Calculate the electric field strength midway between a 3.0 uC charged object and a 6.0 uC object if they are 0.80 m apart.

6) What is the potential at a distance of 6.0 cm from a 2.5 uC charge?

7) Two parallel plates are 7.3 cm apart. If the electric field strength between the plates is 2.0x103 V/m, what is the potential difference between the plates?