



King Saud University – Muzahimiah Branch

Faculty of Information Technology and Computer Sciences

Home Work (2) Electric Field

Due Date : Wednesday 12/11/2014

Hand solution to Teaching Assistant: Eng. Mohammed Ashraf

Question 1:

Determine the electric force between two protons ($q_1 = q_2 = 1.6 \times 10^{-19}$ C) separated by a distance $= 2 \times 10^{-15}$ m). Distinguish whether the electric force between two protons is attractive or repulsive force.

Question 2:

Three point charges are located at the corners of an equilateral triangle as shown in Figure 1. Calculate the resultant electric force on the $7 \mu\text{C}$ (Hint: $\mu\text{C} = 10^{-6}$ C) charge.

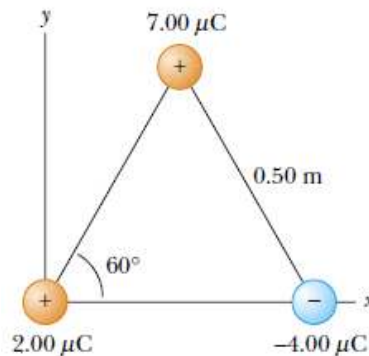


Figure 1: Question 2.

Question 3:

Three point charges are arranged as shown in Figure 2. (a) Find the vector electric field that the 6.00 nC and -3.00 nC (Hint: $\text{nC} = 10^{-9}$ C) charges together create at the origin. (b) Find the vector force on the 5.00 nC charge.

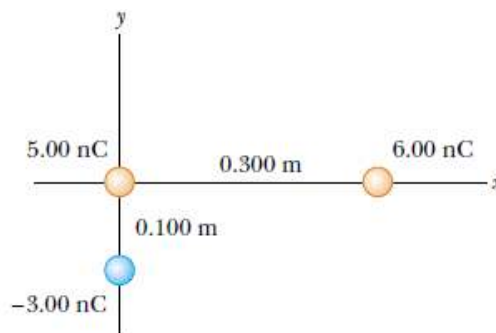


Figure 2: Question 3.