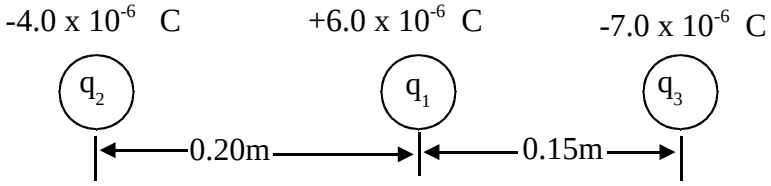
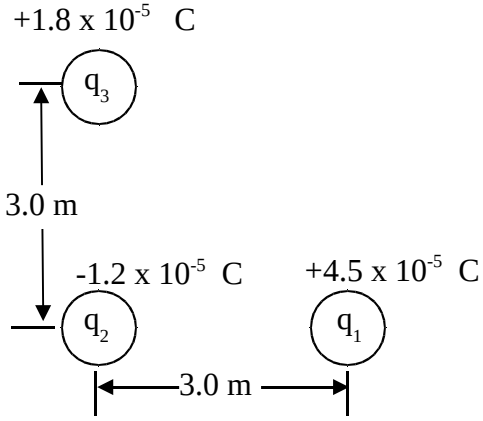
Multiple Charges

1. The figure below shows three point charges that lie along the x axis. Determine the magnitude and direction of the net electrostatic force on charge q_1.



2. Three charges are placed as shown below. Determine the magnitude and direction of the net electrostatic force on charge q1. As part of the solution, include a force diagram.



4. Two point charges are placed on the y-axis. One is +3.0 μC and located at position (0, 2 m), the other is -2.0 μC and located at the origin. Use the diagram to find the magnitude and direction of the electric field and the force on a +1.0 x 10^{-9} C test charge placed in the following locations.

a. (0, 1 m)
b. (0, -2 m)
c. (1m, 0)