1. Three charges are arranged in a right triangle as shown to the right.  $q_1$  has charge  $5 \times 10^{-6}$  C,  $q_2$  has charge  $-7 \times 10^{-6}$  C, and  $q_3$  has charge  $10 \times 10^{-6}$  C. Calculate the net force (magnitude and direction) on  $q_3$ .

