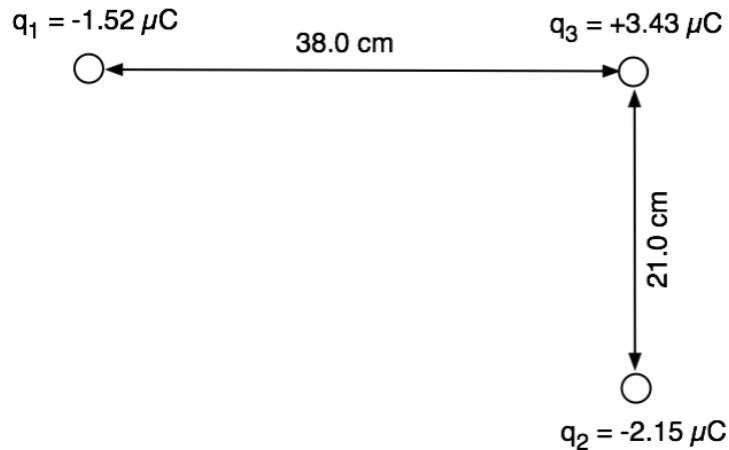


Quiz 19.2C

Three charges are arranged in the distribution shown below. Charges q_1 and q_3 are fixed in place and do not move. q_2 is a small ball with a mass of 32.0 grams, and it is initially at rest.



- a) What is the voltage at the initial location of q_2 ?
- b) An applied force helps move q_2 to a location at the midpoint between charges q_1 and q_3 . When q_2 arrives at that location, it has a speed of 1.22 m/s. What is the voltage at this final location?
- c) How much work is done by the electric force as q_2 moves to its final location?
- d) How much work is done by the applied force as q_2 moves to its final location?