

Point charge practice

Physics 201

Spring 2018

1. Find the electrostatic force on a $4.5\ \mu\text{C}$ charge at the point $x=-1\text{m}$, $y=5\text{m}$, due to two point charges:
 - a. Point charge a: $q_a = 6.1\ \mu\text{C}$, $x=3$, $y=7\text{m}$
 - b. Point charge b: $q_b = -3.5\ \mu\text{C}$, $x=6\text{m}$, $y=0\text{m}$

Advice: first, draw the picture, carefully. Next, you may wish to find the magnitude of each force on the charge. Finally, you may wish to find all the angles and break each into x and y components. One μC (micro Coulomb) is $10^{-6}\ \text{C}$.