## Ch 19 HW Quiz \#3A

Three charges are arranged in a line as shown below. $q_{4}$ and $q_{7}$ are fixed in place. $q_{1}$ is free to move left or right along the $x$-axis. Assume the electric force is the only relevant force.
a) In which direction will charge $q_{1}$ move if it starts at rest?
b) If $\mathrm{q}_{1}$ has a mass of 34 grams, what will its speed be after moving 12 cm from its initial position, starting from rest?


$$
\mathrm{q}_{7}=-7.2 \mu \mathrm{C}
$$

$$
\mathrm{q}_{4}=+4.6 \mu \mathrm{C} \quad \mathrm{q}_{1}=+1.3 \mu \mathrm{C}
$$

