Source: KB20200824224100

1 | And now, a Guided Problem Solve

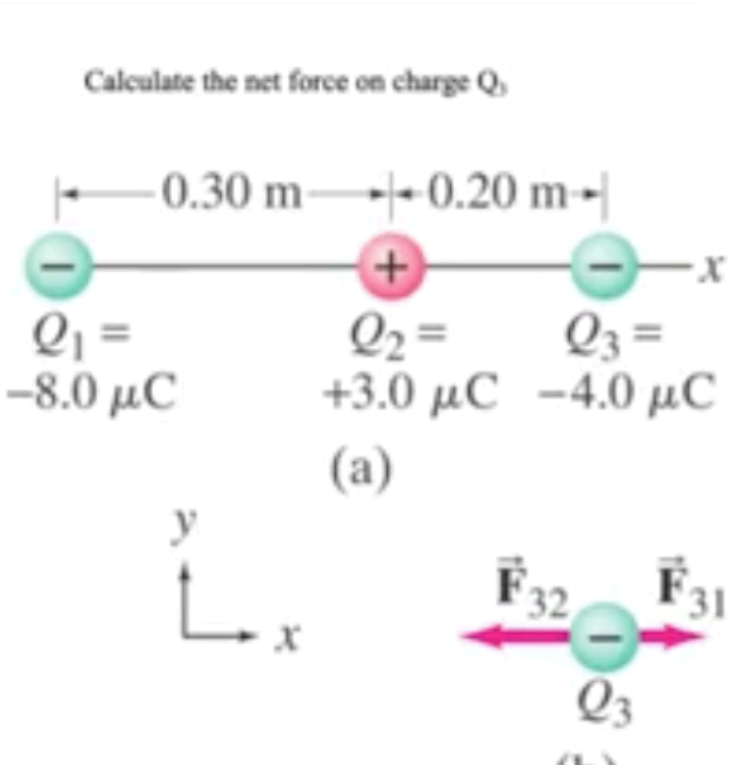

Figure 1: Screen Shot 2020-08-24 at 8.06.36 PM.png

Notice! This one is a little different because there are three charges.

We could see that, because of the fact that Q_2 is closer to $Q3$ then $Q1$ is and the two particles are pulling in different directions, we could infer that $||F_{32}||$ is larger then $||F_{31}||$. Because of this, we could find that Q_3 will have a net force "to the left" — in F_{32}'s direction.

And, because of that, we know that Q_3 will be accelerating towards the left. But **Notice**!, whenever Q_3 moves towards the left, the distances between the particles changed, meaning the force acting upon Q_3 changes! Meaning, Q_3's acceleration "to the left" is not constant. Unfortunately, then, no equation of kinematics for us :(.