

Source: [KBhPHYS201ColoumbsLaw](#)

## 1 | And now, a Guided Problem Solve

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  $Q_3$  than  $Q_1$  is and the two particles are pulling in different directions, we could infer that  $||F_{32}||$  is larger than  $||F_{31}||$ . 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 :(.