goals:

- Review three ways to think about trigonometric functions.

- Let students know what sort of things they are expected to know in Calculus.

- Practice.

1. **Unit Circle Definition**
   Help them think through the numbers at the 30 degree mark.
   As a group add in the points in the first quadrant. Treat this as students do, like memorization.
   Observe that one can fill out all the others by symmetry alone. Give students 2 minutes to do this and compare.
   Point out that sine, cosine and tangent aren't here anywhere... So where are they? Together figure out sine, cosine and tangent of $\pi/6$.
   Then have them figure out parts (a), (b) and (c) below.
   Explain what a radian is.

2. **Right-triangle Definition** After going over the right triangle definition, go back and show how the right triangle definition fits with the unit circle definition.

3. **Familiar Graphs** Then use the previous info to construct confirm the familiar graphs.

   Now have the students work in groups.