1. Familiarize yourself with the applet. Drag the point on the slider left and right across the segment until you feel comfortable with the lay out and how the applet functions.
2. As you were dragging the point on the slider, what did you notice was happening as you were increasing and decreasing the angle size?
3. Now lets focus on only the red segment or cosine of the angle. Take the slider and move it to 0 degrees. From there, slowly drag the point while also keeping track of the angle and the point associated with cosine. What do you notice about the cosine value as you are changing the angle?
4. What is the cosine value is actually measuring? (Hint: think about the components of slope and what they represent on a coordinate plane.)
5. Repeat Questions 3 and 4 but for the blue segment or sine of the angle.
6. What conjecture can be made about what the sine and cosine values represent in a coordinate plane?
7. Now take your slider and drag the slider until the angle is at 30 degrees. Using the knowledge from questions 3-5, what are the sine and cosine values of this angle?
8. Do the same process you did for question 6 for these different angles: 45, 60, 90, 120, 135, 150, and 180 degrees.