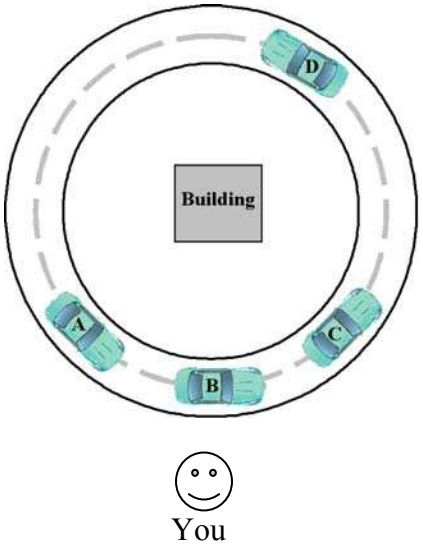
Measuring the Mass of Jupiter **Pre-Lab Assignment** **Astronomy 100** **Due at the beginning of lab**	**Name:** _____ **Section:** _____

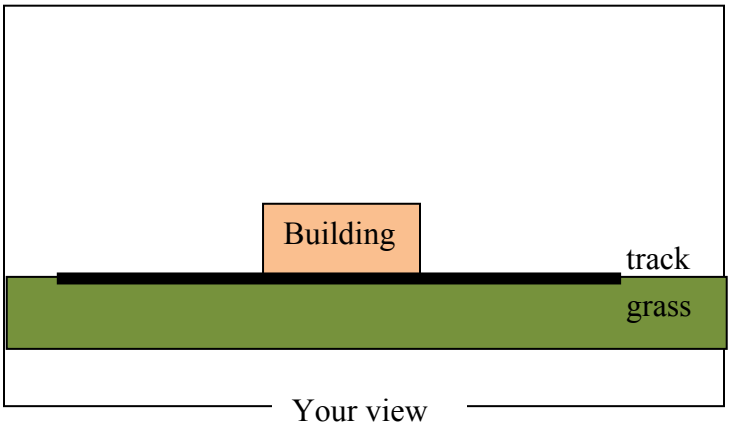
You are watching a car race where the cars drive on a circular track. In the center of the track there is a maintenance building. You view the car race from ground level at a distance of 100 yards from the closest part of the track.

1. From your perspective, would you expect the cars to appear to be moving (circle one)

   (a) In a big circle
   (b) In an oval
   (c) In a straight line back and forth

2. Mark with a letter on the diagram at the right, where each car would appear with respect to the maintenance building (from your perspective).





3. If the car is always 100 feet from the central building, what is the

   a. Maximum distance it can appear from the building from your perspective: _____ ft

   b. Minimum distance it can appear from the building from your perspective: _____ ft

4. Review the text or the online notes for this lab and consider the general form of Kepler's 3rd Law. If the distance of a satellite from the Earth increases, what happens to its orbit period? (circle one)

   a. It increases.
   b. It decreases.
   c. It stays the same.