Maze Game

Open: Maze Game from my teachers folder.

1. The goal of this game is to have the red ball hit the blue finish circle. Observe the position, velocity, and acceleration vectors as you play this game. You can control the movement of the ball by changing the magnitude and direction of either the position, velocity, or acceleration vectors at the bottom right. Try a few practice movements.

2. Click Level One, Reset the Clock, click the Position Vector, and click Start Game. Play a couple times and record your best times for each level by controlling each vector.
   a. Level One Position Time: _____
   b. Level One Velocity Time: _____
   c. Level One Acceleration Time: _____

3. Click Level Two
   a. Level Two Position Time: _____
   b. Level Two Velocity Time: _____
   c. Level Two Acceleration Time: _____

4. If you have time at the end of the period try playing “Certain Death”
   a. “Certain Death” _____
   b. “Certain Death” _____
   c. “Certain Death” _____

5. Describe what happens in the following situations.
   a. What happens to the ball as the position vector is made large compared to a small vector?

   b. Move the position vector to the left, then back to the origin (arrow disappears) Describe the motion of the ball.

c. What happens to the ball as the velocity vector is made large compared to a small vector?

d. Move the velocity vector to the left, then back to the origin (arrow disappears) Describe the motion of the ball.

e. What happens to the ball as the acceleration vector is made large compared to a small vector?

f. Move the acceleration vector to the left, then back to the origin (arrow disappears) Describe the motion of the ball.