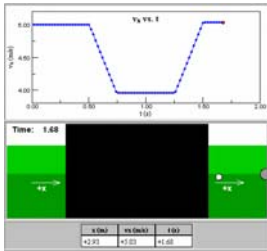


Worksheet for Exploration 2.3: A Curtain Blocks Your View of a Golf Ball



A puttied golf ball (not shown to scale) rolls on a green. A black curtain blocks your view of the ball, but otherwise does not interfere with the ball's motion (**position is given in meters and time is given in seconds**). The animation is a side view of the ball rolling on the green.

Analyze the velocity vs. time graph for the ball and describe the terrain of the green behind the curtain that blocks your view. Give valid reasons for your answer.

- i. The graph can be divided into five periods of time. What is the acceleration for each?

$$a_1 = \underline{\hspace{2cm}}$$

$$a_2 = \underline{\hspace{2cm}}$$

$$a_3 = \underline{\hspace{2cm}}$$

$$a_4 = \underline{\hspace{2cm}}$$

$$a_5 = \underline{\hspace{2cm}}$$

- ii. Physically what can happen behind the screen to change the acceleration?

After you answer this question, check the correct answer.