

A green ball began rolling up a ramp with an initial speed of 3.5 m/s. Because of the incline of the ramp the ball had a constant acceleration of  $1.2 \text{ m/s}^2$  (pointing down the ramp). Exactly 0.74 seconds after the ball began rolling up the ramp, a robot began moving down the ramp at a constant speed of 5.4 m/s. At the time the robot started moving it was 13.3 meters away from the green ball.

How long was the green ball rolling before it bumped into the robot?