

Questions:

- A. Newton's first law says a body at rest will remain at rest unless acted upon by an outside force, and a body in motion will continue in motion at the same speed and in the same direction unless acted upon by an outside force. What forces were acting on the marble as it traveled down the ramp?

- B. Did the velocity of the marble increase as it traveled down the ramp?

- C. Did the acceleration of the marble increase as it traveled down the ramp?

- D. What would happen to the velocity and acceleration of the marble if the ramp were steeper? How about if the ramp were vertical? If you have trouble answering this, repeat the experiment with a steeper ramp.

- E. As you are riding in a car your body is at rest relative to the car but in motion relative to the street. What might happen to the passengers in a car during a sudden stop or crash if there are loose objects stacked in the rear window of the car?