

Lesson 6: What Type of Surface Will Allow a Ball to Roll a Greater Distance?

Activity 6.1

Purpose

Conduct an experiment that measures rolling distance of a foam ball on different surfaces when it rolls down a ramp. Answer the following questions before you start your experiment.

+ Safety

Use the toy balls only to perform the lab. Do not misuse the lab equipment.

Variables

What is the independent variable (manipulated variable) for this experiment?

What is the dependent variable (measured/ responding variable) for this experiment?

What are the controlled variables (variables that stay the same) for this experiment? (State at least 3)

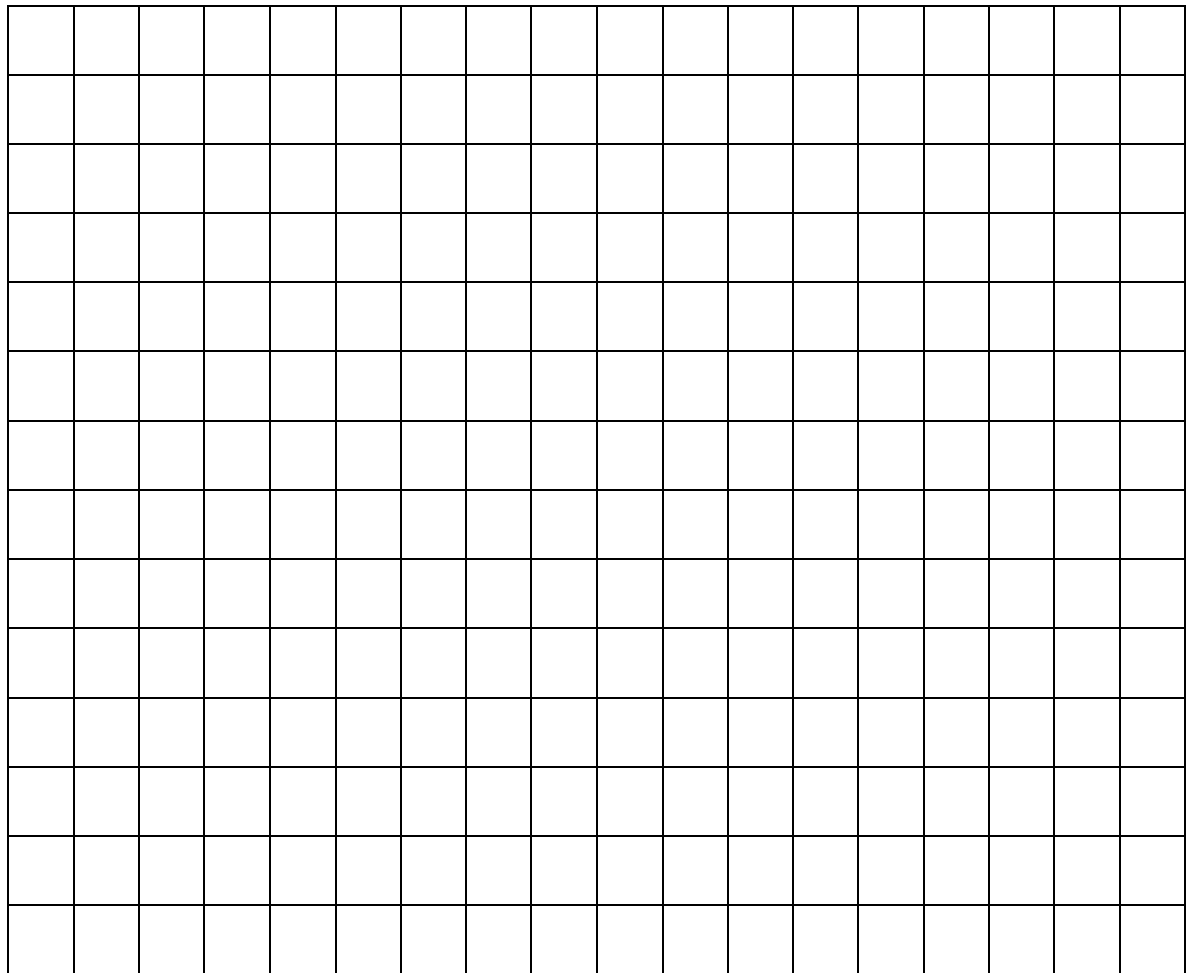
Data

Trial #	Distance Traveled on Tile (cm.)	Distance Traveled on Carpet (cm.)
Trial 1		
Trial 2		
Trial 3		
Trial 4		
Trial 5		
Average Distance		

Your Progress:

- Mastery
- Proficient
- Developing
- Beginning

Use this grid to create a graph with your 5 trials (same color) and average (different color) for each type of surface. Be sure that the graph has all of the correct parts.



As the ball rolls down the ramp, what type of energy **conversion** happens?

How do the different surfaces affect the kinetic energy of the ball after it rolls down the ramp?

What happens to the kinetic energy of the ball?
