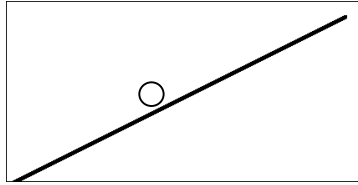


Variables

Name _____ Date _____

Directions: Carefully read the paragraph below. In it you will learn a little more about variables. Then answer the questions that follow.



Olivia wants to see how far she can roll a marble down a ramp. She thinks that if she changes the height of the ramp the ball will go farther. She first rolls the marble from a height of 30cm. She then changes the height of the ramp to 60cm and rolls the marble again. In this experiment, Olivia **changed the height of the ramp** because she wanted to see if that would affect the distance the marble rolled. Therefore, the height of the ramp is the **variable**. There are many other variables that Olivia could test in this experiment.

- The size of the marble (does a big marble roll farther than a small marble?)
- The length of the ramp (will the marble roll farther if she rolls it down a long ramp or a short ramp?)

Use the information above to answer the following questions.

1. Adam is trying to grow three plants, but he is not sure how. He puts them in three different pots and adds a different kind of soil to each. In one pot Adam puts in plain soil. In the second pot he puts the plant in with plain soil mixed with cow manure. In the last pot he puts in Miracle-Gro soil with fertilizer. What is the variable in this experiment?

2. Karen is growing three plants also. However, instead of changing the soil, she thinks that different amounts of sunlight will affect how tall they grow. She puts one in the window where it receives full sunlight all day. She puts one in across the room where it receives sunlight only part of the day. Finally, Karen puts one in the bathroom where it receives no sunlight. What is the variable in this experiment?

3. A pendulum is a weight tied to the end of a string. When pushed, the weight will swing through the air in a back and forth motion. Leah thinks that she can make a pendulum swing faster by using a shorter string. She creates three pendulums with strings of different lengths to test this. What is the variable in this experiment?

