Name _____
Date _____

Rolling Marble Experiments

Instructions:

1. Select a quiet, hard-working partner.
2. Select measuring tools needed to measure velocity (distance and time).
3. Get one marble for the group.
4. Get two pieces of masking tape.
5. Get books from your desk. Each group needs three books.
6. The **distance** for these experiments will be one meter. Measure one meter on the floor. Put tape at the beginning line and the ending line.
7. Decide which partner will roll the marble and which will time the roll. The partner who is timing will say "go" when the second hand is in a good place for timing. The partner who is rolling will say "stop" when the marble crosses the one meter mark.
8. Each partner will complete his or her own data sheet.
9. Complete all three experiments.

Experiment One

Place the marble at the beginning line on the floor. When the timer says "go", the roller will thump the marble towards the ending line saying "stop" as the marble crosses the one meter mark. Complete the data chart to find the velocity of the marble for experiment one.

Experiment Two

Place one book on the floor and a second book on the first making a ramp to the floor. Measure from the ending line going up the ramp to be sure the marble will still travel one meter. Adjust the placement of the ramp as needed to keep the distance at one meter. Repeat the rolling and timing. Find the velocity of the marble and complete the data chart.

Experiment Three

Add one more book to make a stack on the floor and raise the ramp. Repeat the rolling, timing, finding the velocity, and the data chart.

Rolling Marble Data Chart

Remember to label your answers with the correct unit of measure.

Experiment One 	**v = d = t =** **v = d/t**
Experiment Two 	**v = d = t =** **v = d/t**
Experiment Three 	**v = d = t =** **v = d/t**