FINDING SPEED

NAME_____
PER_____PAGE___

OBJECTIVE:_____

RESEARCH:

Distance:_____

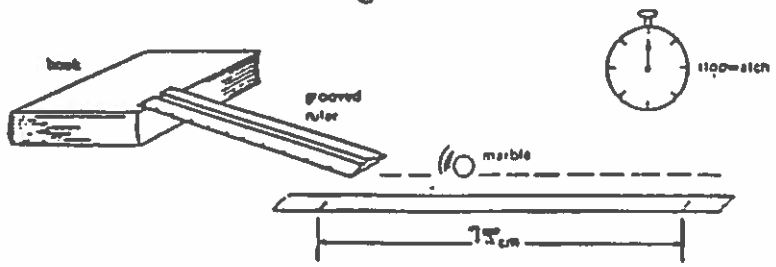
Time:_____

Speed:_____

Calculating Speed:_____

ACTIVITY:

1. Arrange the ramp as shown in the figure below:



2. You will measure the motion of the marble when it is traveling on the **LEVEL** surface.
3. Place the meterstick so that the 0 cm end is parallel to the bottom of the ramp.
4. Choose a point on the ramp. You should release the marble from the same point on the ramp each time.
5. Start with a ramp height of one book.
6. Release the marble. When the marble reaches the table, start your stopwatch. When the marble reaches the 75 cm mark, stop your stopwatch. Record your observations in Table 1.
7. Repeat using 2, 3, and 4 books.
8. Calculate the speed of the marble after each ramp height.

TABLE 1. DATA

# OF BOOKS (ramp height)	DISTANCE	--	TIME (sec)	=	SPEED
1	75 cm		____ s		_____cm/sec
2	75 cm		____ s		_____cm/sec
3	75 cm		____ s		_____cm/sec
4	75 cm		____ s		_____cm/sec

CONCLUSIONS:

1. To calculate speed, a student must measure the _____ an object in motion moves and the _____ it takes for the object to cover that distance.

2. How does the speed of the marble change when the height of the ramp increases?

3. Do you think you would find the same average speed if the distance measurement was only 25 cm instead of 75 cm? Why or why not? (Disregard friction in your answer)