

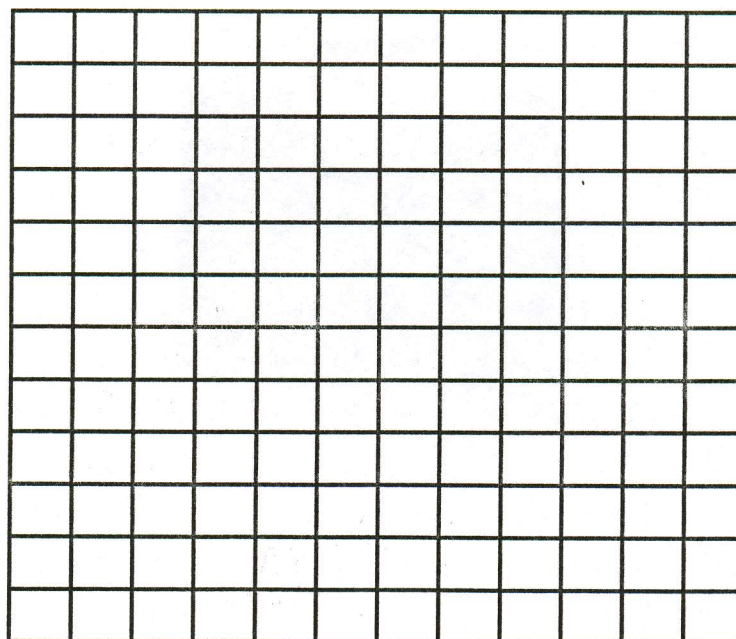
Inclined to roll Data Table

# of Books	Angle	Trial #	Time (s)	Distance (cm)	Ave. distance	Avg. Speed
1		1	2 seconds			
		2	2 seconds			
		3	2 seconds			
		4	2 seconds			
# of Books	Angle	Trial #	Time (s)	Distance (cm)	Ave. distance	Avg. Speed
2		1	2 seconds			
		2	2 seconds			
		3	2 seconds			
		4	2 seconds			
# of Books	Angle	Trial #	Time (s)	Distance (cm)	Ave. distance	Avg. Speed
3		1	2 seconds			
		2	2 seconds			
		3	2 seconds			
		4	2 seconds			

Line Graph

Plot the average speed of the marble (on the y-axis) against the angle of the ruler (on the x-axis). Connect the points.

Average Marble Speed



Angle of the ruler

NAME _____

Analyze and Conclude

Use the data from your table and your graph to answer the following questions.

1. What happened to the speed of the marble as you increased the angle of the ruler?
2. Predict what the speed of the marble would be if you added a fourth book.
3. How would you describe the average speed of the marble as a velocity?
4. Do you think your method of timing was accurate?
5. Explain your answer to question #4.
6. A truck driver transporting new cars needs to roll cars off of the truck. You offer to design a ramp to help with the task. What measurements might you make that would be useful?

Word Game

On the lines below, write the word or words that best fit the description on the left. When you are finished, the boxed-in letters will spell out one of the topics discussed in the chapter. Fill in that word or phrase in the space provided.

1. Change in velocity divided by time for the change
 _____ □ _____
2. Negative acceleration
 _____ □ _____
3. Mass times velocity
 _____ □ _____
4. Momentum law that states that the total momentum of an object is constant if no outside force acts on it
 _____ □ _____
5. Total distance divided by total time
 _____ □ _____
6. Change in position relative to a frame of reference
 _____ □ _____
7. Distance traveled per time unit
 _____ □ _____
8. Speed in a given direction
 _____ □ _____
9. Moving object travels the same distance in equal units of time
 _____ □ _____
10. Object or point from which motion is determined
 _____ □ _____
11. Name for a slanted line on a graph
 _____ □ _____

Kind of acceleration that is directed toward the center of a circular path
