

Car Inquiry Questions

Directions: Write the purpose and answer any of the questions in this inquiry.

Purpose:

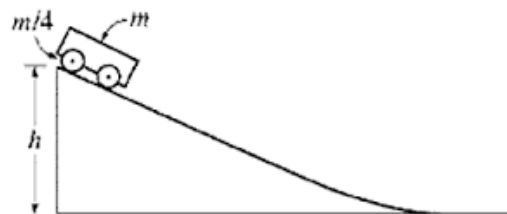
How does changing the angle of a ramp affect the speed of a car?

Background Information:

What is the formula for speed?

Hypothesis:

Write a hypothesis as to what will happen to the speed of a car if you increase the angle of the ramp.



Procedures:

1. Copy down the data table below.
2. What is the manipulated variable for this inquiry?
3. What is the responding variable for this inquiry?
4. Gather your materials from your work station
 - a. 10 science books
 - b. 1 roll of tape
 - c. 1 car
 - d. 1 measuring tape
 - e. 1 cardboard ramp
 - f. 1 stopwatches
5. Stack up the 3 books and place the cardboard ramp on top of the ramp so that the back of the ramp is flush (even) with the back of the stack of books.
6. Place a small piece of tape at the bottom of the cardboard ramp to the floor to keep the ramp from moving.
7. Measure from the bottom of the ramp 1.5 meters and put a piece of tape down to mark the finish line.
8. Place the back tires of the car flush (even) with the end of the ramp.
9. At the same time the car is release start the stopwatch
10. Stop the stopwatch when the front tires touch the finish line.
11. Repeat steps all trials.

Trial	3 books	6 books	10 books	15 books	20 books	25 books
1						
2						
3						
Average						
Speed						

Graphing

1. We will make a bar graph together

Analyzing the Data

1. What was your highest average angle? (number of books or angle)
2. What was your lowest average angle? (number of books or angle)
3. If you had 50 books and the angle was close to 90 degrees do you think you would have a greater or lesser total average speed?
4. Explain your reasoning to the answer above.
5. If you had 0 books and the angle was close to 0 degrees do you think you would have a greater or lesser total average speed?
6. Explain your reasoning to the answer above.

Conclusion – use COMPLETE sentences and don't use the word IT

- Restate your hypothesis
- Was your hypothesis correct or incorrect
- What was the manipulated variable
- What was the responding variable
- What angles (number of books) had the lowest average speed?
- What was the lowest speed? (label your numbers)
- What angles (number of books) had the greatest average speed?
- What was the greatest speed? (label your numbers)
- Answer the purpose question