Ramp Test Results

Turn experiment measurements into clear data models

FSL.3A.2 "Analyze data from simple experiments and construct organized models (e.g., data tables, graphs) detailing results from the experiments."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the conditions Maya kept the same, circle the two quantities named in the table headings, and number the data rows from the lowest ramp height to the highest.

How Far Will the Car Roll?

1 At a school science fair, Maya wondered whether a taller ramp would send a toy car farther across the floor. She used the same car, the same ramp, the same smooth floor, and the same starting mark on the ramp. She changed only the ramp's height and measured how far the car rolled after leaving the ramp.

2 Each test began with the car held still at the starting mark, then released without a push. Maya measured ramp height vertically from the floor to the raised end. She measured roll distance along the floor from the end of the ramp to where the car stopped. She ran one trial at each height and recorded the results below.

TOY CAR RAMP TEST

Ramp height (cm)	Roll distance (cm)
5	42
10	79
15	111
20	143

3 A data table keeps each ramp height paired with the distance measured in that test. That makes it possible to compare tests and look for a pattern. Maya's results came from just one run at each height, so they cannot show how much the distance might vary between runs. Repeating each test would give her more evidence about the pattern.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which quantity did Maya change, and which quantity did she measure as the result? Include units.

2. How much farther did the car roll at a ramp height of 20 cm than at 5 cm? Show the subtraction.

3. Which 5 cm increase in ramp height produced the greatest increase in roll distance? Use the data to support your answer.

4. On a graph with ramp height on the horizontal axis and roll distance on the vertical axis, what point would represent the 15 cm test? Include units.

3 YOUR TURN

Your own words

In a different experiment, a rubber band stretched 2 cm with one identical paper clip, 4 cm with two, and 6 cm with three. Enter the results in the table, then write one sentence describing the pattern.

PAPER CLIPS (NUMBER)	STRETCH (CM)

Ramp Test Results

PART 1 · READ AND MARK

Underline the conditions Maya kept the same, circle the two quantities named in the table headings, and number the data rows from the lowest ramp height to the highest. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which quantity did Maya change, and which quantity did she measure as the result? Include units.	**She changed ramp height (cm) and measured roll distance (cm).**
2	How much farther did the car roll at a ramp height of 20 cm than at 5 cm? Show the subtraction.	**143 cm − 42 cm = 101 cm farther.**
3	Which 5 cm increase in ramp height produced the greatest increase in roll distance? Use the data to support your answer.	**From 5 cm to 10 cm. Roll distance increased from 42 cm to 79 cm, a gain of 37 cm; the other 5 cm steps each gained 32 cm.**
4	On a graph with ramp height on the horizontal axis and roll distance on the vertical axis, what point would represent the 15 cm test? Include units.	**The point is (15 cm, 111 cm).**

PART 3 · YOUR TURN (SAMPLE ANSWER)

1 | 2
2 | 4
3 | 6
The rubber band stretched 2 cm more for each paper clip added.

Accept equivalent calculations and descriptions that match the data. For Your Turn, each table row must pair the correct number of paper clips with its measured stretch, and the sentence must describe the increasing pattern.