PRACTICE ASSIGNMENT

Question and method

Question: How does distance change with time?

A cart moves at a steady speed on a level track.

Prediction: distance increases by 0.40 m each second.

METHOD

1. Mark the start line and place the cart behind it.
2. Start a timer when the cart crosses the line.
3. Record distance at one-second intervals.
4. Repeat the observations and compare the trend.

Model: distance = speed x time

Expected speed = 0.40 meters per second

Synthetic teaching example. No student data.

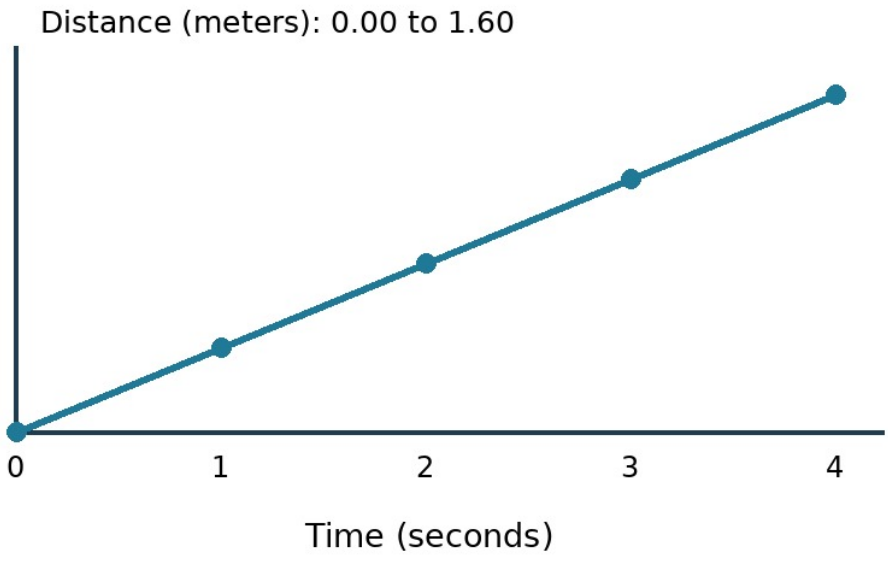
PRACTICE ASSIGNMENT

Measurements and graph

OBSERVATIONS

Time (seconds)	Distance (meters)
0	0.00
1	0.40
2	0.80
3	1.20
4	1.60

The graph below shows the same five observations.



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Conclusion and checks

RESULT

The cart covered 1.60 meters in 4 seconds.

Calculated speed = 1.60 / 4 = 0.40 m/s.

This agrees with the prediction on page 1.

LIMITATIONS

Starting the timer late would affect each reading.

A sloped track could change the speed.

BEFORE SUBMITTING

Check all three pages are upright and in order.

Check the graph labels and units are readable.

Follow your instructor's file-size and format rules.

Synthetic teaching example. No student data.