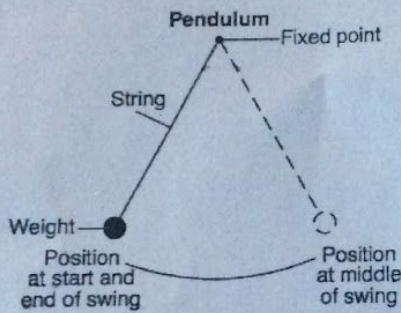


ANSWER KEY FOR UNIT 1 EXAM 23 AND 24

Passage for Question 23

****If you do not have time to type your answers in the form, please type "ON PAPER"****

The diagram represents a pendulum, which is a weight attached by a string to a fixed point and allowed to swing freely back and forth. Eryca, Joseph, Ava and Matthew did an experiment in which they timed, in seconds (s), how long it took for the pendulum to complete one swing (back and forth) for five different string lengths. They changed the length of the rope: 20 cm, 40 cm, 60 cm, 80 cm, 100 cm. They measured the time it took for each rope length to complete one swing. The collected data one time for each rope length. The results are shown in the data table. During their experiment they made sure to keep the type of string the same. They also used the same weight and Ava was the only one to time the pendulum's swing.



Data Table

String Length (cm)	Time to Complete One Swing (s)
20	0.9
40	1.3
60	1.8
80	1.8
100	2.0

A. Testable Question:

What is the effect of String length on time to complete one swing?

B. Independent Variable

String length

Levels	C.	D.	E.	F.	G.
	<i>20 cm</i>	<i>40 cm</i>	<i>60 cm</i>	<i>80 cm</i>	<i>100 cm</i>
Trials	H. <i>1</i>	(Same as H)	(Same as H)	(Same as H)	(Same as H)

I. Dependent Variable

time to complete one swing (s)

J. ONLY ONE Constant/Controlled Variable

type of string, weight of pendulum, same person recording, same # trials

Question 24

Use the data table to create a LINE GRAPH.
 ****On the form, please type "ON PAPER"****

Don't Forget!

- Label your X axis and Y axis
- Use the numbers in the data table to create a scale for your graph.
- Write your title: The effect of IV on DV
- Put units where they belong!
- Plot your points, then connect them with a line.

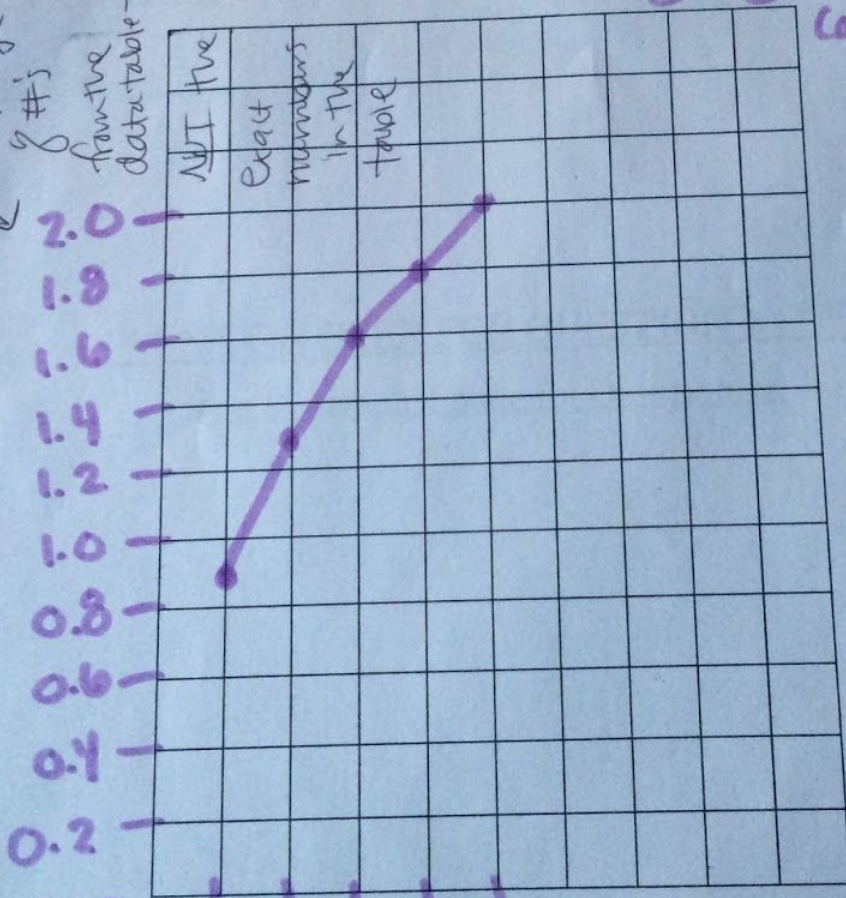
Data Table

String Length (cm)	Time to Complete One Swing (s)
20	0.9
40	1.3
60	1.6
80	1.8
100	2.0

Title: The effect of String length on time to complete one swing

This has to contain a range of #s from the data table -

String length (cm)



complete one swing

IV →

Time (s)

this can be spaced out as long as the interval is consistent - should match data table