

St. Andrews Scots Sr. Sec.School

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Session: 2026 – 2027

(Answer Key)

Class: VI

Subject: Science

Chapter: Exploring Measurement Of Length and Motion

(Assertion-reason)

Page 68

1. (a) 2. (a)

(Application-Based Question)

To find the total length of the paper clip, subtract the reading at one end from the reading at the other end:

Total Length = 4.3cm – 1.0cm = 3.3cm

Total Length of the Paper Clip: 3.3 cm

Multiple Choice Question (MCQ). Tick (✓) the correct options.

Page 71

(c)

(Think and answer)

The pendulum of a wall clock exhibits oscillatory motion, as it moves back and forth around a fixed point.

Exercise Section-A

A. Oral Questions:

1. Before rulers, people measured using body parts or natural objects.
2. Standard units are universal measurements used for consistency and accuracy.
3. Body parts vary in size, making them unreliable for accurate measurements.
4. Oscillatory motion is a repeated back-and-forth movement, like a swing in a playground.

B. Multiple Choice Questions (MCQs). Tick (✓) the correct options.

1. (b) 2. (b) 3.(c) 4.(b) 5. (d) 6.(b)
7. (b) 8. (b)

C. Assertion-Reason-based Questions:

1. (a)
2. (d)

D. Case-based Questions:

Case 1:

- (a) Oscillatory motion.
- (b) Linear motion.
- (c) Uniform circular motion

Case 2:

- (a) They indicate the distance to the destination, helping drivers gauge their progress.
- (b) It means the distance to the destination is decreasing as they approach it.
- (c) They are at rest.

Case 3:

1. (b)
2. (c)
3. Oscillatory motion is the to-and -fro motion of an object about its mean position.

SECTION – B

A. Very Short Answer Questions:

1. The basic unit of length in the metric system is the metre.
2. Linear motion is the movement of an object along a straight path.
3. An example of circular motion is a car turning around a curve.
4. A cubit is an ancient unit of length based on the distance from the elbow to the tip of the middle finger, used for measuring lengths in construction and textiles.
5. Standard units are important because they provide a consistent way to measure and communicate quantities, ensuring clarity and accuracy in comparisons.

B. Short Answer Questions:

1. Using handspans or foot lengths for measurement can lead to inaccuracies because these body parts vary in size from person to person. This lack of standardisation

means that measurements taken with these methods can differ significantly, making it difficult to achieve consistent results.

2. Kindly refer question no.2 of long question answer.

3. Two Modern Tools Used to Measure Length:

Ruler:

- A ruler is a flat, straight tool marked with measurements (like centimeters and inches).
- You place it next to the object you want to measure and see where the end of the object lines up with the numbers on the ruler.

Measuring Tape:

- A measuring tape is a long, flexible strip with measurements on it, usually made of cloth or plastic.
- You can stretch it around objects or along surfaces to find out how long or wide they are, and it's great for measuring things like furniture or walls!

4. A reference point provides a starting point or baseline from which measurements are taken. It helps ensure that measurements are consistent and accurate, allowing for reliable comparisons between distances or positions.

C. Long Answer Questions:

1. An object is at rest if its position does not change with respect to a reference point over time.

An object is at motion if its position does change with respect to a reference point over time.

Example- A parked car is at rest, while a moving bus is in motion.

2. **Linear Motion:** Movement in a straight line, like a car driving down a road.

Circular Motion: Movement in a circle, like a Ferris wheel spinning.

Oscillatory Motion: Back-and-forth movement around a central point, like a swing in a playground.

3. **Get a Measuring Tape:** Use a tape long enough for the playground. Choose a **Starting Point:** Start measuring from one end of the playground. Unroll the Tape: Hold one end at the start and unroll it to the other end.
Find the End Point: Stop at the opposite end.

Read the Measurement: Check the number on the tape where the playground ends.

Double-check: Measure again to confirm accuracy.

D. Application-Based Questions:

1. To find the total length of the eraser, subtract the smaller reading from the larger reading:

$$\text{Total Length} = 3.5\text{cm} - 1.0\text{ cm} = 2.5\text{cm}.$$

2. The change from 45 km to 44 km shows that Priya's bus has moved 1 kilometre closer to her town. This tells us that the bus is moving towards her destination, and the distance between the bus and the town is decreasing.