



# INDIAN SCHOOL AL WADI AL KABIR



<b>CLASS: VI</b>	<b>DEPARTMENT: SCIENCE</b> <b>2025- 2026</b>	<b>DATE: 05/02/2026</b>
<b>TEXTBOOK Q &amp; A</b>	<b>TOPIC: MEASUREMENT OF LENGTH AND MOTION</b>	<b>NOTE: A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT:</b>	<b>CLASS &amp; SEC:</b>	<b>ROLL NO.</b>

Let us enhance our learning



1. Some lengths are given in Column I of Table 5.5. Some units are given in Column II. Match the lengths with the units suitable for measuring those lengths.

**Table 5.5**

Column I	Column II
Distance between Delhi and Lucknow	centimetre
Thickness of a coin	kilometre
Length of an eraser	metre
Length of school ground	millimetre

**[Hint:**

Column I	Column II
Distance between Delhi and Lucknow	<b>Kilometre</b>
Thickness of a coin	<b>Millimetre</b>
Length of an eraser	<b>Centimetre</b>
Length of the school ground	<b>Metre</b>

2. Read the following statements and mark True (T) or False (F) against each.
- (i) The motion of a car moving on a straight road is an example of linear motion. **[T]**
  - (ii) Any object which is changing its position with respect to a reference point with time is said to be in motion. **[T]**
  - (iii)  $1 \text{ km} = 100 \text{ cm}$  **[F]**

3. Which of the following is not a standard unit of measuring length?

- (i) millimetre (ii) centimetre (iii) kilometre (iv) handspan

**[Hint: (iv) handspan]**

4. Search for the different scales or measuring tapes at your home and school. Find out the smallest value that can be measured using each of these scales. Record your observations in a tabular form.

**Hint:**

<b>LOCATION</b>	<b>DIFFERENT SCALES</b>	<b>SMALLEST MEASUREMENT</b>
<b>School</b>	<b>Ruler (Plastic/steel/wooden)</b>	<b>1 mm (0.1 cm)</b>
<b>School/Ground</b>	<b>Long Measuring Tape (construction)</b>	<b>1 mm (0.1 cm)</b>
<b>Home</b>	<b>Ruler (Plastic/steel/wooden)</b>	<b>1 mm (0.1 cm)</b>
<b>Home</b>	<b>Measuring Tape (Tailor's tape)</b>	<b>1 mm (0.1 cm)</b>

5. Suppose the distance between your school and home is 1.5 km. Express it in metres.

**[Hint: Solution  $1 \text{ km} = 1000 \text{ m}$ .**

$$1.5 \text{ km} = 1.5 \times 1000 \\ = 1500 \text{ m}]$$

6. Take a tumbler or a bottle. Measure the length of the curved part of the base of the glass or bottle and record it.

**[Hint: We can measure the curved part of the base of a glass or bottle by using a flexible measuring tape or a thread and can note the measurement in millimetres or centimetres as per the tape.]**

7. Measure the height of your friend and express it in (i) metres, (ii) centimetres and (iii) millimetres.

**[Hint: (i) The height of my friend is recorded as 1.65 meters.**

**(ii) As we know that 1 metre = 100 cm;**

**Therefore,  $1.65 \text{ m} = 1.65 \times 100 = 165 \text{ cm}$  (height in cm);**

**(iii) Also, we know that 1 centimetre = 10 millimetres;**

**Therefore,  $165 \text{ cm} = 165 \times 10 = 1650 \text{ mm}$  (height in mm).]**

8. You are given a coin. Estimate how many coins are required to be placed one after the other lengthwise, without leaving any gap between them, to cover the whole length of the chosen side

of a notebook. Verify your estimate by measuring the same side of the notebook and the size of the coin using a 15-cm scale.

**[Hint: Estimation**

The length of one side of the notebook appears to be about **24 cm**.

The diameter of one coin is approximately **2.5 cm**.

**Estimated number of coins required**

$$\frac{24}{2.5} = 10 \text{ coins}$$

So, **about 10 coins** are estimated to cover the length of the notebook.

**Verification: (Measurement using a 15-cm scale)**

- Length of the notebook side = **24 cm**
- Diameter of the coin = **2.5 cm**

**Actual number of coins required**

$$\frac{24}{2.5} = 10 \text{ coins}$$

The estimated number of coins (10) is the same as the actual number obtained by measurement. This shows that estimation gives a fairly accurate idea before exact measurement.]

9. Give two examples each for linear, circular and oscillatory motion.

**[Hint: Linear motion-** a car moving on a straight road, a stone falling straight down from a height.

**Circular motion** – Blades of a ceiling fan, a merry-go-round in a park.

**Oscillatory motion** – Pendulum of a clock, a swing moving to and fro.]

10. Observe different objects around you. It is easier to express the lengths of some objects in mm, some in cm and some in m. Make a list of three objects in each category and enter them in the Table 5.6.

Table 5.6: Sizes of objects around us

Size	Objects
mm	
cm	
m	

[Hint:

Size	Objects
<b>Mm</b>	<b>Thickness of a coin, nail, needle, or pin.</b>
<b>Cm</b>	<b>Length of a pencil, length &amp; breadth of an eraser, width of a notebook.</b>
<b>M</b>	<b>Height of a door, height of a person, length of a car, height of a tree, length of a classroom.</b>

11. A rollercoaster track is made in the shape shown in Fig. 5.19. A ball starts from point A and escapes through point F. Identify the types of motion of the ball on the rollercoaster and the corresponding portions of the track.

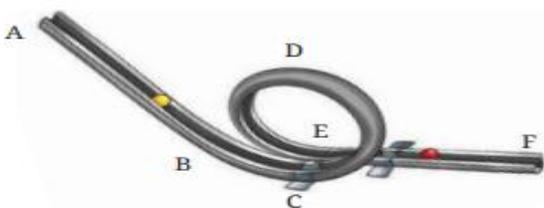


Fig. 5.19: Rollercoaster track

[Hint: From A to B linear motion  
From C to E circular motion  
From E to F linear motion.]

12. Tasneem wants to make a metre scale by herself. She considers the following materials for it—plywood, paper, cloth, stretchable rubber and steel. Which of these should she not use and why?

[Hint: Tasneem should not use paper, stretchable rubber and cloth to make a metre scale. Reason- These materials are flexible or stretchable, so they cannot give accurate measurements. A metre scale must be made of a rigid material that does not change its length, such as wood (plywood) or steel, to ensure precise measurement.]

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