

CLASS 6 SCIENCE WORKSHEET – SET A**Chapter 5: Measurement of Length and Motion (NCERT Curiosity)**

Name: _____ Class: 6 ____ Date: _____

1. Multiple Choice Questions [$10 \times 1 = 10$]

Choose the correct option.

1. The SI unit of length is
(a) kilometre (b) metre (c) centimetre (d) handspan
2. 1 kilometre is equal to
(a) 100 m (b) 10 m (c) 1000 m (d) 500 m
3. 1 centimetre is equal to
(a) 1 mm (b) 10 mm (c) 100 mm (d) 1000 mm
4. Which of the following is NOT a standard unit of length?
(a) millimetre (b) centimetre (c) kilometre (d) handspan
5. The smallest length that can be measured with a 15-cm scale is
(a) 1 cm (b) 1 mm (c) 1 m (d) 0.1 mm
6. While reading a scale, the eye should be placed
(a) to the left of the mark (b) to the right of the mark (c) directly above the mark (d) anywhere
7. The girth of a tree is best measured using
(a) a metre scale (b) a 15-cm scale (c) a flexible measuring tape (d) a wooden ruler
8. When an object moves along a circular path, its motion is called
(a) linear motion (b) circular motion (c) oscillatory motion (d) straight motion
9. The motion of a swing is an example of
(a) linear motion (b) circular motion (c) oscillatory motion (d) no motion
10. The distance 1.5 km expressed in metres is
(a) 15 m (b) 150 m (c) 1500 m (d) 15000 m

2. Fill in the Blanks [$10 \times 1 = 10$]

1. The SI unit of length is _____.
2. 1 km = _____ m.
3. The length of a table expressed in handspans has a number and a _____.
4. One metre is divided into _____ equal divisions called centimetres.
5. A 15-cm scale has markings from 0 to _____ cm.
6. While reading a scale, the eye must be placed directly _____ the mark.

7. The length of a curved line can be measured using a flexible tape or a _____.
8. A fixed point with respect to which distance is stated is called a _____ point.
9. Motion of an object along a straight line is called _____ motion.
10. The motion of a child on a swing is _____ motion.

3. True or False [10 × 1 = 10]

1. The SI unit of length is the metre. (_____)
2. 1 km = 100 m. (_____)
3. A handspan is a standard unit of length. (_____)
4. Each centimetre on a scale is divided into 10 millimetres. (_____)
5. The scale should be placed in contact with the object along its length. (_____)
6. A metre scale is the best tool to measure the girth of a tree. (_____)
7. A scale with broken ends cannot be used for measurement. (_____)
8. A car moving on a straight road shows linear motion. (_____)
9. A swing shows circular motion. (_____)
10. An object at rest changes its position with time. (_____)

4. Match the Following [10 × 1 = 10]

Column A	Column B
1. Distance between Delhi and Lucknow (_____)	a. 1000 m
2. Thickness of a coin (_____)	b. circular motion
3. Length of an eraser (_____)	c. millimetre
4. Length of school ground (_____)	d. 10 mm
5. 1 km (_____)	e. kilometre
6. 1 m (_____)	f. linear motion
7. 1 cm (_____)	g. metre
8. Swing (_____)	h. oscillatory motion
9. Merry-go-round (_____)	i. centimetre
10. Heavy box pushed along a straight line (_____)	j. 100 cm

5. Answer in 2 Lines [$10 \times 2 = 20$]

1. What is the SI unit of length? Write its symbol.

2. Write the relation between km, m, cm and mm.

3. Why do measurements made with a handspan differ from person to person?

4. What is a unit? Give one example.

5. What is the smallest value that can be measured with a 15-cm scale?

6. How should a scale be placed to measure the length of an object?

7. How can you measure the length of a curved line?

8. Define a reference point.

9. When is an object said to be in motion?

10. Define linear motion and give one example.

6. Write Short Notes (4 or 5 points with examples / diagram) [$5 \times 5 = 25$]

1. Write short notes on Standard Units (SI Units).

2. Write short notes on the correct way of measuring length.

3. Write short notes on measuring the length of a curved line.

4. Write short notes on a reference point.

5. Write short notes on the types of motion.

7. Give the Answer in a Word [10 × 1 = 10]

Read each definition and write the term.

1. The unit of length in the International System of Units. _____
2. Each of the 100 equal divisions of a metre. _____
3. One-tenth of a centimetre. _____
4. The unit equal to 1000 metres. _____
5. A fixed point with respect to which position is stated. _____
6. Motion of an object along a straight line. _____
7. Motion of an object along a circular path. _____
8. To and fro motion about a fixed position. _____
9. Motion that repeats its path after a fixed interval of time. _____
10. The system of standard units adopted by countries (abbreviated as SI).

ANSWER KEY – SET A

1. Multiple Choice Questions []

1-b 2-c 3-b 4-d 5-b 6-c 7-c 8-b 9-c 10-c

2. Fill in the Blanks []

1. metre
2. 1000
3. unit
4. 100
5. 15
6. above
7. thread
8. reference
9. linear
10. oscillatory

3. True or False []

1-True 2-False 3-False 4-True 5-True 6-False 7-False 8-True 9-False 10-False

4. Match the Following []

1-e 2-c 3-i 4-g 5-a 6-j 7-d 8-h 9-b 10-f

5. Answer in 2 Lines []

1. The SI unit of length is the metre. Its symbol is m.
2. 1 km = 1000 m, 1 m = 100 cm and 1 cm = 10 mm.
3. The handspans of different people are of different sizes. So the number of handspans for the same length also differs.
4. A unit is a fixed quantity chosen for measurement. For example, a handspan or a metre.
5. The smallest value is 1 mm. It is one-tenth of a centimetre (0.1 cm).
6. The scale must be placed in contact with the object along its length. The zero mark should be at one end of the object.
7. Place a thread along the curve and then straighten it. Measure the straightened thread with a metre scale. A flexible tape can also be used.
8. When distance is stated with respect to a fixed object or point, that point is called the reference point.
9. An object is in motion if its position changes with respect to a reference point with time.
10. Motion along a straight line is linear motion. Example: a car moving on a straight road.

6. Short Notes (model answers) []

1. Standard Units (SI Units).

- People used units like handspan, foot and fist, which differ from person to person.
- This caused confusion when people travelled from place to place.
- Countries agreed on standard units called the International System of Units (SI units).
- The SI unit of length is the metre (m).
- Example: 1 km = 1000 m, 1 m = 100 cm, 1 cm = 10 mm. (Fig. 5.2: a metre scale)

2. the correct way of measuring length.

- Choose a suitable scale: a 15-cm scale for a pencil, a metre scale for a room.
- Place the scale in contact with the object along its length (Fig. 5.4a is correct).
- Keep the eye directly above the mark being read (position B in Fig. 5.5).
- If the ends of the scale are broken, start from another full mark and subtract readings.
- Always write the unit with the number, e.g. 9.4 cm.

3. measuring the length of a curved line.

- A metre scale cannot be laid straight along a curved line.
- Take a thread and place it carefully along the curve.
- Mark the end point, then straighten the thread.
- Measure the straightened thread with a metre scale. (Fig. 5.8)
- A flexible measuring tape can also be used, e.g. to measure string lights on an arch (Fig. 5.7).

4. a reference point.

- A reference point is a fixed object or point from which distance is stated.
- Deepa and her friends gave different answers because they used different houses as starting points.
- If all had used the bus stand as the reference point, their answers would be the same (Fig. 5.9).
- For the kabaddi court, a point on the ground is chosen as the reference point (Fig. 5.11).
- On the kilometre stone 'Delhi 70 km', Delhi is the reference point.

5. the types of motion.

- Linear motion: motion along a straight line, e.g. a car on a straight road, a pushed box (Fig. 5.14).
- Circular motion: motion along a circular path, e.g. a merry-go-round, a whirled eraser (Fig. 5.15).
- Oscillatory motion: to and fro motion about a fixed position, e.g. a swing, a vibrating metal strip (Fig. 5.16, 5.17).
- Circular and oscillatory motions repeat after a fixed time, so they are periodic.
- An object is in motion if its position changes with respect to a reference point.

7. Give the Answer in a Word []

1. metre
2. centimetre
3. millimetre
4. kilometre
5. reference point
6. linear motion
7. circular motion
8. oscillatory motion
9. periodic motion
10. International System of Units