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# Measurement of Length and Motion

## ORAL QUESTIONS

**A. Answer these questions orally.**

1. What are the two types of translatory motion?
2. What are the two types of circular motion?
3. One minute is equal to how many seconds?
4. One hour is equal to how many seconds?
5. What is the SI unit of temperature?
6. What is a thermometer?

**B. Match the Columns.**

| COLUMN A | | COLUMN B | |
|---|---|---|---|
| 1. | 1 tonne | (a) | 1000 mg |
| 2. | 1 mg | (b) | 100 kg |
| 3. | 1 g | (c) | 10,00,000 mg |
| 4. | 1 kg | (d) | 1000 kg |
| 5. | 1 quintal | (e) | 1/1000 g |

## PUZZLE/QUIZ

**C. Complete the following word ladder with the help of the clues given.**

1. A physical quantity
2. A unit of temperature
3. Distance between the tip of the thumb and little finger of a completely stretched hand
4. A device used to measure very short intervals of time accurately
5. Distance between the elbow and the tip of the middle finger of an arm
6. The SI unit of mass
7. A device used to measure temperature
8. The SI unit of length
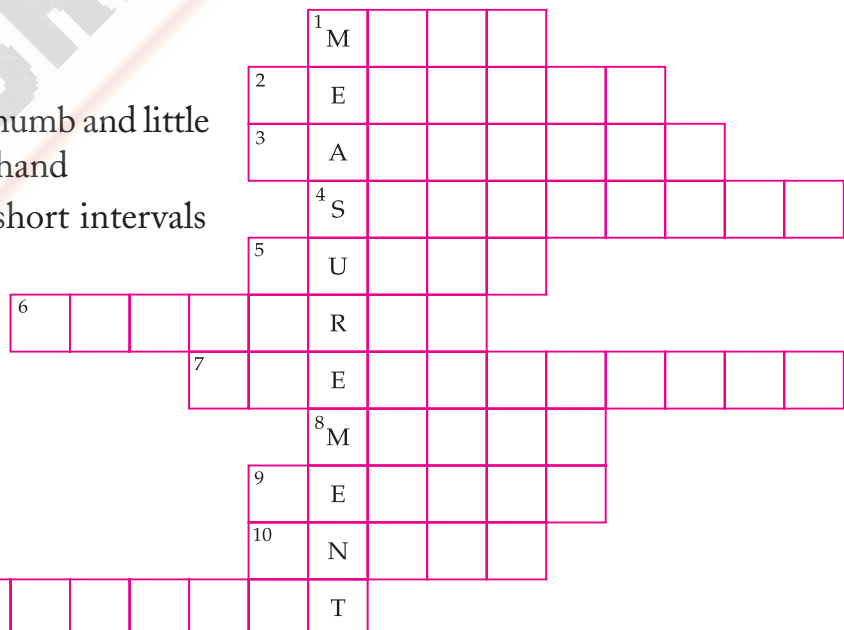
9. Another unit of temperature
10. Width of a finger
11. Unit of temperature used for clinical purposes

## CLASS TEST

**D. MCQ–Tick (✓) the correct option.**

1. What is the length of this line?

   (a) 9.2 cm ☐　　　(b) 5.2 cm ☐

   (c) 5.0 cm ☐　　　(d) 4.0 cm ☐

2. Which unit of length will you use to express the distance between New Delhi and Mumbai?

   (a) m ☐　　　(b) km ☐

   (c) cm ☐　　　(d) dm ☐

3. 5.4 km is equal to

   (a) 5400 cm ☐　　　(b) 540 cm ☐

   (c) 54 cm ☐　　　(d) 540000 cm ☐

4. 7.5 m is equal to

   (a) 75 mm ☐　　　(b) 750 mm ☐

   (c) 7500 mm ☐　　　(d) 75000 mm ☐

5. What is the smallest length which can be measured accurately by using a scale?

   (a) 1 cm ☐　　　(b) 1 m ☐

   (c) 1 km ☐　　　(d) 1 mm ☐

6. Which measuring device will you use to measure the girth of a tree?

   (a) Divider ☐　　　(b) Ruler ☐

   (c) Measuring tape ☐　　　(d) All the above ☐

7. Arrange these masses in the increasing order :
   gram, quintal, milligram, kilogram

   (a) gram, quintal, milligram, kilogram ☐

   (b) quintal, gram, milligram, kilogram ☐

   (c) milligram, gram, kilogram, quintal ☐

   (d) quintal, kilogram, gram, milligram ☐

**E. Very short answer questions.**

1. Give the most appropriate term for the following.

   (a) A fixed known amount (unit) of specific quantity, accepted universally

   _____

   (b) Anything that can be measured.

   _____

   (c) Width of a finger.

   _____

2. What is a periodic motion?

   _____

   _____

3. How was length measured by man in ancient times?

   _____

   _____

4. What do you understand by 'physical quantities'?

   _____

   _____

5. Name three common devices used for measuring length.

   _____

   _____

   _____

6. On what factors does the choice of a measuring device to be used depend on?

   _____

   _____

7. What do you understand by 'temperature'?

   _____

   _____

   _____

**F. Short answer questions.**

1. What do you understand by the term 'motion'?

   _____

   _____

2. What do you understand by 'rectilinear motion'?

   _____

   _____

3. The distance between Ritu's house and her school is 5.75 km. What is the distance in metres?

   _____

   _____

4. Rizwan's height is 163 cm. What is his height in millimetres?

   _____

   _____

**G. Long answer questions.**

1. Oscillatory motion and vibratory motion are periodic motions. Justify the statement.

   _____

   _____

   _____

2. How will you measure the diameter of a spherical ball?

   _____

   _____

   _____

   _____

3. How will you measure the thickness of a metallic scale?

   _____

   _____

   _____

_____

_____

4. How will you measure the length of a curved line?

_____

_____

_____

_____

**H. Think and answer.**

1. Gautam observed the motion of a drill machine used by a carpenter for drilling a hole in the wooden almirah. He classified it as simultaneous motion. Why?

_____

_____

2. Supriya wanted to measure the length of her Hindi copy. When she took a scale, she found that the end of the scale was worn out between 1 cm and 2 cm readings due to overuse.

   (a) Where should she start measuring so that she gets a correct measurement?

_____

_____

   (b) How should she position her eyes to note down the correct reading?

_____

_____

   (c) If she starts measuring from 3 cm and the other end of the copy is at 14.8 cm, what should she do to obtain the correct length of the copy?

_____

_____

   (d) What is the length of her copy?

_____

_____

3. Pankaj wanted to know the thickness of a page of his science book. There were 216 pages in his book. He measured the total thickness of the pages with a metre scale and found out to be 1.3 cm.

(a) How will he calculate the total thickness of one page?

_____

_____

(b) Calculate the thickness of one page of his science book.

_____

_____

(c) Can you use the above method to find the thickness of a one-rupee coin? How?

_____

_____

_____

_____

_____

_____

## WORKSHEET

**I. Give reasons for the following.**

1. The length of a curved line cannot be measured with a scale. Why?

_____

_____

_____

2. While noting down the reading, the eye should be placed just vertically above the reading of the scale.

_____

_____

_____