

UNIT 1 - MEASUREMENTS

Class: VI

Subject: Science

I. Choose the correct answer.

1. The height of a tree can be measured by

- a) Metre scale b) Metre rod c) Plastic ruler **d) Measuring tape**

2. Conversion of 7 m into cm gives _____

- a) 70 cm b) 7 cm **c) 700 cm** d) 7000 cm

3. Quantity that can be measured is called _____

- a) Physical quantity** b) Measurement c) Unit d) Motion

4. Choose the correct one

- a) km > mm > cm > m b) km > mm > m > cm
c) **km > m > cm > mm** d) km > cm > m > mm

5. While measuring the length of an object using a ruler, the position of your eye should be

- a) Left side of the point.
b) Vertically above the point where the measurement is to be taken.
c) Right side of the point
d) Any where according to one's convenience.

II. Fill in the blanks.

1. SI Unit of length is symbolically represented as Meter.

2. $500 \text{ g} = \frac{1}{2}$ or 0.5 kilogram.

3. The distance between Delhi and Chennai can be measured in Kilometre .
4. 1 m = 100 cm.
5. 5 km = 5000 m.

III. State True or False.

1. We can say that mass of an object is 126 kg. **TRUE**
2. Length of one's chest can be measured using metre scale. **FALSE**
3. Ten Millimetre makes one centimetre. **TRUE**
4. A hand span is a reliable measure o length. **FALSE**
5. The SI system of units is accepted every where in the world. **TRUE**

IV. Complete the analogy.

1. Sugar : Beam balance :: Lime juice : ____? (**Measuring Jar**)
2. Height of a person : cm :: Length of four sharpened pencil lead : ____? (**mm**)
3. Milk : Volume :: Vegetables : ____? (**-mass**)

V. Match the following.

1. Length of the fore arm - Metre [2]
2. SI unit of length - Second [4]
3. Nano - 10^3 [5]
4. SI Unit of time - 10^{-9} [3]
5. Kilo - Cubit [1]

VI. Arrange the following in the increasing order of unit.

1Metre, 1centimetre, 1 kilometre, and 1 millimetre.

ANS: 1millimetre, 1 centimetre ,1 metre,1kilometre

VII. Answer in a word or two.

1. What is the full form of SI system? International System Of Unit
2. Name any one instrument used for measuring mass. Beam Balance
3. Find the odd one out.

kilogram, millimetre, centimetre, nanometre

4. What is the SI Unit of mass? Kilogram
5. What are the two parts present in a measurement? Multiple, Sub

VIII. Find the answer for the following questions within the grid.

1. 10^{-3} is one Millimetre
2. SI Unit of time is Second
3. Cross view of reading a measurement leads to Error
4. Time is the one what a clock reads.
5. Mass is the amount of substance present in an object.
6. Average can be taken to get the final reading of the recordings of different students for a single measurement.
7. Length is a fundamental quantity.
8. Odometer shows the distance covered by an automobile
9. A tailor uses Tape to take measurements to stitch the cloth.
10. Liquids are measured with this physical quantity Litre.

IX. Answer briefly.

1. Define measurement.

The comparison of an unknown quantity with some known quantity is known as measurement.

2. Define mass.

Mass is the measure of the amount of matter in an object.

3. The distance between two places is 43.65 km. Convert it into metre and cm.

a) Convert km into metre

$$1 \text{ km} = 1000 \text{ m}$$

$$43.65 \text{ km} = 43.65 \times 1000$$

$$= 43650.00$$

$$= 43650 \text{ m}$$

Volume b) Convert km into cm

$$1 \text{ km} = 1000 \text{ m}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$43.65 \text{ km} = 43650 \text{ m}$$

$$= 43650 \times 100$$

$$= 4365000 \text{ cm}$$

4. What are the rules to be followed to make accurate measurement with scale?

Correct position of the eye is also important for taking measurement.

Your eye must be vertically above the point where the measurement has to be taken. In the above representation, to avoid parallax error.

X. Solve the following.

1. The distance between your school and your house is 2250 m. Express this distance in kilometre.

Distance between school and house is 2250 m

$$\begin{aligned} 2250 \text{ m} &= 2250 \text{ m} \div 1000 \\ &= 2.25 \text{ km.} \end{aligned}$$

2. While measuring the length of a sharpened pencil, reading of the scale at one end is 2.0 cm and at the other end is 12.1 cm. What is the length of the pencil?

The difference between the two readings is the length of the pencil

$$\begin{aligned} &= 12.1 \text{ cm} - 2.0 \text{ cm} \\ &= 10.1 \text{ cm or } 10 \text{ cm and } 1 \text{ mm.} \end{aligned}$$

XI. Answer in detail.

1. Explain two methods that you can use to measure the length of a curved line.

- Draw a curved line AB on a piece of paper
- Place a string along the curved line. Make sure that the string covers every bit of the curved line.
- Mark the points where the curved line begins and ends on the string.
- Now, stretch the string along the length of a meter scale and measure the distance between the two markings of the string and note it.
- This will give you the length of a curved line.

2. Fill in the following chart.

Property	Definition	Basic Unit	Instrument used for measuring
Length	2	Metre	Metre scale, measuring tape
Mass	8	Kilogram	Beam balance
Volume		Solid-metre liquid-litre	Measuring scale graduated cylinder.
Time		Second	clock

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