



1. Give two examples each of modes of transport used on land, water and air.

Ans: (i) Land—Bus, truck, train.

(ii) Water—Ship, boat.

(iii) Air—Aeroplane, Helicopter.

2. Fill in the blanks:

(i) One metre is _____

(ii) Five kilometre is _____

(iii) Motion of a child on a swing is _____ .

(iv) Motion of the needle of a sewing machine is _____ .

(v) Motion of wheel of a bicycle is _____ .

Ans:

(i) 100

(ii) 5000

(iii) periodic (oscillatory) motion

(iv) periodic oscillatory

(v) circular.

3. Why can a pace or a footstep not be used as a standard unit of length?

Ans: Because a pace or a footstep of each and every person is not equal.

4. Arrange the following lengths in their increasing magnitude :

1 metre, 1 centimetre, 1 kilometre, 1 millimetre.

Ans: Ascending order of length:

1 millimetre < 1 centimetre < 1 metre < 1 kilometre

5. The height of a person is 1.65 m. Express it in cm and mm.

Ans:

(a) 1.65 m, as one metre = 100 cm

= $1.65 \times 100 \text{ cm} = 165 \text{ cm}$

(b) $65 \times 100 \times 10 \text{ mm} = 1650 \text{ mm}$.

6. The distance between Radha's home and her school is 3250 ,m.

Express this distance in km.

Ans:

As one km = 1000 m

So, $3250 \text{ m} = \frac{3250}{1000} \text{ km} = 3.250 \text{ km}$

Thus, distance between Radha's home and her school is 3.250 km.

7. While measuring the length of a knitting needle, the reading of the scale at one end is 3.0 cm and at the other end is 33.1 cm. What is the length of the needle?

Ans: Length of the needle = $33.1 \text{ cm} - 3.0 \text{ cm} = 30.1 \text{ cm}$.

8. Write the similarities and differences between the motion of a bicycle and a ceiling fan that has been switched on.

Ans:

(i) Similarity: Both the wheel of a bicycle and a ceiling fan exhibit motion on a fixed axis.

(ii) Dissimilarity: Bicycle moves forward thus executes rectilinear motion but fan does not show such motion.

9. Why could you not use an elastic measuring tape to measure distance? What would be some of the problems you would meet in telling someone about a distance you measured with an elastic tape?

Ans: An elastic measuring tape gives incorrect length of the distance between two points.

Reasons:

(i) The length of the elastic tape varies and depends upon the force by which it is stretched.

(ii) Measurement would vary between 2 or 3 readings even when measured by the same person and by the same elastic tape.

(iii) Measurement would also vary if different persons measure the same distance.

10. Give two examples of periodic motion.

Ans: (i) Oscillations of a pendulum.

(ii) Motion of swing/motion of earth round the sun.

VERY SHORT ANSWER TYPE QUESTIONS

1. Are senses reliable for accurate measurement?

Ans: Our senses are not reliable for accurate measurement.

2. Why can hand span and arm length not be used as standard units of length?

Ans: because these vary from person to person.

3. How many centimetres are there in 1 m?

Ans: 100 cm.

4. Name the measuring device which can be used for measuring the girth of a tree.

Ans: Measuring tape.

5. Give one example of linear motion.

Ans: Motion of stone falling from a certain height.

6. Give an example of circular motion.

Ans: Motion of arms of watch.

7. Name the types of motion in which a body moves along a straight path

Ans: Rectilinear or linear motion.

8. Find the length and breadth of given rectangle in mm and cm.

As one km = 1000 m

$$\text{So, } 3250 \text{ m} = \frac{3250}{1000} \text{ km} = 3.250 \text{ km}$$

Thus, distance between Radha's home and her school is 3.250 km.

Ans: Using measuring scale (15 cm scale), Length AB = 3 cm and breadth BC = 2 cm.

$$AB = 3 \times 10 = 30 \text{ mm}$$

$$BC = 2 \times 10 = 20 \text{ mm.}$$

9. Give the unit for measuring the following:

(a) Distance between Delhi and Jaipur.

(b) Thickness of a coin.

(c) Length of your eraser.

(d) Length of your shoe lace.

Ans:

(a) Kilometre

(b) Millimetre

(c) Centimetre

(d) Centimetre

10. Name the device used to measure the following:

(a) Size of your shoulder.

(b) Size of your wrist.

- (c) Your height.
- (d) Your weight.
- (e) Cloth for curtain.
- (f) Circumference of round table.

Ans:

- (a) Measuring tape
- (b) Measuring tape
- (c) Measuring tape
- (d) Weighing balance
- (e) Metre scale or measuring tape
- (f) A long thread or measuring tape.

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