# NCERT Solution

## Motion and Measurement of Distances
## Exercise

1. **Give two example each, of modes of transport used on land, water, air.**
Answer.

(a) On land  :  Car,Train, bus

(b) In water  : Boat, Ship

(c) In air     :  Aeroplane, Helicopter.

2. **Fill in the blanks.**

**(1)  One meter _____ cm.**

**(2)  Five kilometers _____ m.**

**(3) Motion of child on sewing is _____**

**(4) Motion of the needle of sewing machine is _____.**

Answer:

(1) One meter **100** cm

(2) Five kilometers **5000** m.

(3) Motion of child on a swing is **circular motion.**

(4) Motion of the needle of sewing machine is **period motion**.

3. **Why can a place or a footstep not be used as a standard unit o length?**
Answer.

We cannot use place or footstep as standard unit of land as the size of foot and footstep will not be the same for every individual. Thus the measurement will not be the same for different people.

4. **Arrange the following lengths in their increasing magnitude.**

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

Answer:

1 millimetre <1 centimetre <1 metre <1 kilometre.

5. The height of a person is 1.65 m. Express, into cm and mm.
Answer:

1.65 x 100    = 165cm.    ( 1 m= 100 cm)

  1.65 x 1000 = 1650 mm. ( 1 m= 1000 mm)

6. **The distance between Radha's home and her schools 3250m. Express this distance into Km.**

Answer: The distance between the Radha's home and her school in Km=

$\frac{3250}{1000}$ = 3.25 Km.

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

Answer:

33.1cm- 3.0= 30.1 cm.

Length of the needle is 30.1cm.

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

Answer:

Similarities: Wheel of a bicycle and ceiling fan (when on) both show circular motion.

Differences: Cycle moves in rectilinear motion.

9. **Why could you not use an elastic measuring tape to measure distance?**

**What would be some of the problem you would meet in telling someone about a distance you measured with an elastic tape?**

Answer:

Elastic tap will not give accurate measurement because it stretches in length and reduces in size when not stretched. While telling the measurement taken with an elastic tape. We have to tell whether the tape was stretched and by how much. This is very difficult.

10. **Give two examples of periodic motion.**

Answer:

(a) Pendulum.

(b) Child on the swing.