

CBSE Class–VI Subject Science

NCERT Solutions (CHAPTER-

10)

MOTION AND MEASUREMENT OF DISTANCES

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

Answer:

On Land	In Water	In Air
Car, Train	Boat, Ship	Aeroplance, Helicopter

Question 2. Fill in the blanks:

- (i) One meter is ----- cm.
- (ii) Five kilometer is ----- m.
- (iii) Motion of a child on a swing is -----.
- (iv) Motion of the needle of a swing machine is -----.
- (v) Motion of a wheel of a bicycle is -----.

- Answer:** (i) One meter is **100** cm.
(ii) Five kilometer is **5000** m.
(iii) Motion of a child on a swing is **Oscillatory motion**.
(iv) Motion of the needle of a swing machine is **periodic motion**.
(v) Motion of a wheel of a bicycle is **circular motion**

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

Answer: We cannot use pace or a footstep as standard unit of length as the size of foot and the footstep will not be the same for every individual. Thus, the measurement will not be same for different people.

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

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



Answer: 1 millimetre, 1 centimetre, 1 metre, 1 kilometre.

Question 5. The height of a person is 1.65 m. express it into cm and mm.

Answer: $1.65 \text{ m} = 1.65 \times 100 \text{ cm} = 165 \text{ cm}$ ($1 \text{ m} = 100 \text{ cm}$)

$1.65 \text{ m} = 165 \text{ cm} = 165 \times 10 \text{ mm} = 1650 \text{ mm}$ ($1 \text{ cm} = 10 \text{ mm}$)

Question 6. The distance between Radha's home and her school is 3250 m. express this distance into km.

Answer: $3250 \text{ m} = 3250/1000 \text{ km} = 3.250 \text{ km}$ ($1 \text{ m} = 1/1000 \text{ km}$)

Question 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 33.1 cm. What is the length of the needle?

Answer: Length of needle = final reading - Initial reading = $33.1 \text{ cm} - 3.0 \text{ cm} = 30.1 \text{ cm}$.

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

Answer: Similarities: - Wheel of a bicycle and ceiling fan both shows circular motion.

Differences: - Cycle moves in rectilinear motion but ceiling fan does not move in rectilinear motion.

Question 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?

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.

Question 10. Give two examples of periodic motion.

Answer: Example of periodic motion-

(i)Pendulum

(ii)Child on the swing.