Measurement and Motion

Practice Sheet

Estimate Time : 20 minutes **Maximum Marks : 10**

Instructions

- This test contains 6 questions.
- Q.1 to Q.3 are one-mark questions, to be answer in about one word or one sentence.
- Q.4 & Q.5 are two-mark questions, to be answer in about 50 words.
- Q.6 is three-mark question, to be answer in about 80 words.

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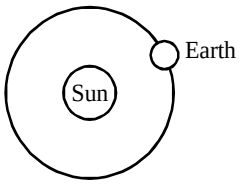
1. See the picture below and write the name of type of motion taking place.

(a) 

(b) 

2. Solve the riddle :

I was used in olden days for measurement. I am the distance between the tips of middle fingers when the arms are stretched fully to either side of body. What am I ?

3. Fill in the blanks :

(i) Length of a pencil box = 20 _____. (m/cm)

(ii) Distance between two cities = 200 _____. (km/inches)

4. Write any two differences between periodic motion and translatory motion.

5. (a) The length of minute hand of clock is 15 cm. What is this length in mm ?

(b) Write the prefix for the following : (i) 10^{-6} (ii) 10^{-2}

6. (i) Which system of units is preferred by scientists ? Why ?

(ii) Write any two correct ways to measure length.

Practice Sheet Solutions

1. (a) Wind mill → Rotatory motion

(b) Earth → Periodic motion

2. Fathom

3. (i) cm (ii) km

4. Two differences between periodic motion and translatory motion.

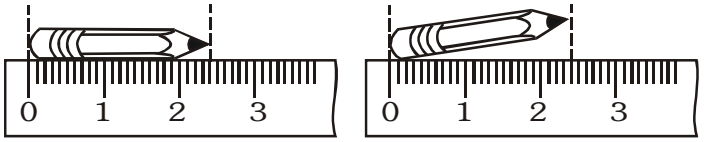
	Periodic motion	Translatory motion
(1)	The moving object repeats its motion in fixed time.	The moving object does not repeat its motion.
(2)	It may or may not take place in straight line.	It is takes place in straight line.

5. (a) 15 cm = 15 × 10 mm = 150 mm (b) (i) Micro (ii) centi

6. (i) Scientists prefer metric system of units. Almost all fields of science use metric units because they are so much easier to work with. Factors of 10 are easier to remember than 12, 3, and 5,280.

(ii) Correct ways to measure length are as follows:-

(a) Place the scale in contact with the object along its length.



(a) Correct (b) Incorrect

Placing the scale along the length to be measured.

(b) In some scales, the ends may be broken. You may not be able to see the zero mark clearly. In such cases, you should avoid taking measurements from the zero mark of the scale. You can use any other full mark of the scale, say, 1.0 cm. Then you must subtract the reading of this mark from the reading at the other end.

(c) Correct position of the eye is also important for taking measurement. Your eye must be exactly in front of the point where the measurement is to be taken (see figure). Position 'B' is the correct position of the eye. Note that from position 'B', the reading is 2.4 cm. From positions 'A' and 'C', the readings may be different.

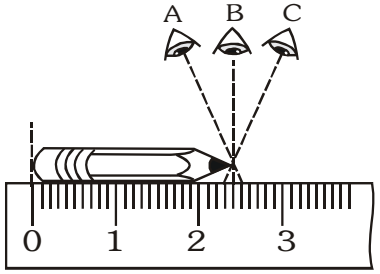


Figure : Correct position of the eye for taking reading of the scale.
Here, position B is the correct position.