

CLASS 6 SCIENCE – PICTURE-BASED QUESTIONS – SET A

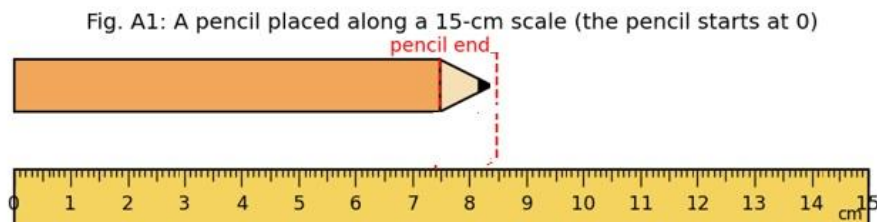
Chapter 5: Measurement of Length and Motion (NCERT Curiosity)

Name: _____ Class: 6 ___ Date: _____ Marks: _____ / 15

Look at each picture carefully and answer the three questions that follow. Each question carries 1 mark.

Picture 1 [3 marks]

Study the figure showing a pencil along a 15-cm scale.



1. What is the length of the pencil?

2. Express this length in millimetres.

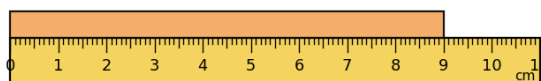
3. What is the smallest length that can be measured with this scale?

Picture 2 [3 marks]

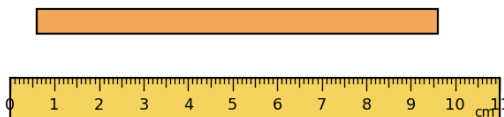
Study the two ways of placing a scale, (a) and (b).

Fig. A2: Two ways of placing a scale to measure a rod (orange)

(a)



(b)



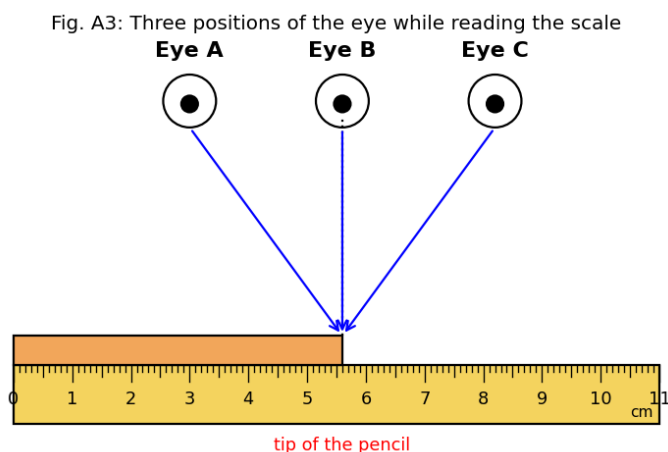
1. Which placement is correct, (a) or (b)?

2. Why is (a) correct?

3. What is wrong with (b)?

Picture 3 [3 marks]

Study the three positions of the eye, A, B and C, while reading the pencil tip.



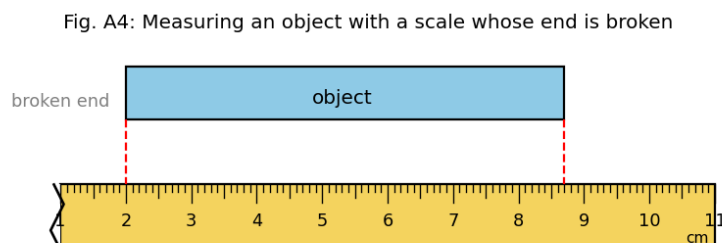
1. Which eye position gives the correct reading?

2. Why are positions A and C wrong?

3. What is the reading of the scale at the pencil tip?

Picture 4 [3 marks]

Study the object placed against a scale whose end is broken.



1. What are the readings at the left and right ends of the object?

2. Find the length of the object.

3. What should we do when the zero mark is broken or not clear?

Picture 5 [3 marks]

Study how the curved line AB is measured with a thread.

Fig. A5: Measuring the length of a curved line



(i) A thread (red) is laid carefully along the curved line AB



(ii) The thread is straightened and placed along a metre scale (in cm)

1. Why is a thread used to measure the curved line AB?

2. What is the length of the straightened thread (the length of the curve AB)?

3. Express the length in millimetres.

ANSWER KEY – SET A

Picture 1

1. 8.5 cm.
2. $8.5 \times 10 = 85$ mm.
3. 1 mm (0.1 cm).

Picture 2

1. (a).
2. In (a), the scale is in contact with the object along its length, so the reading is accurate.
3. In (b) the scale is not in contact with the object, so the reading can be wrong.

Picture 3

1. Position B, directly above the tip of the pencil.
2. The line of sight is slanted, so the tip appears at a wrong mark on the scale.
3. 5.6 cm.

Picture 4

1. 2.0 cm at the left end and 8.7 cm at the right end.
2. $8.7 \text{ cm} - 2.0 \text{ cm} = 6.7 \text{ cm}$.
3. Start from any other full mark and subtract that reading from the other end reading.

Picture 5

1. A scale cannot be laid straight along a curve, but a thread bends along it.
2. 34 cm, as read on the metre scale.
3. $34 \times 10 = 340$ mm.

CLASS 6 SCIENCE – PICTURE-BASED QUESTIONS – SET B

Chapter 5: Measurement of Length and Motion (NCERT Curiosity)

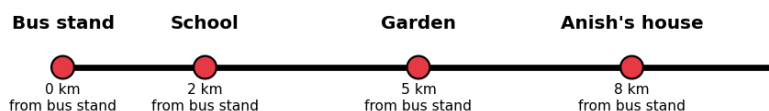
Name: _____ Class: 6 ____ Date: _____ Marks: _____ / 15

Look at each picture carefully and answer the three questions that follow. Each question carries 1 mark.

Picture 1 [3 marks]

Study the positions of the places along the straight road.

Fig. B1: Positions of places along a straight road



1. What is the distance of the school from the bus stand?

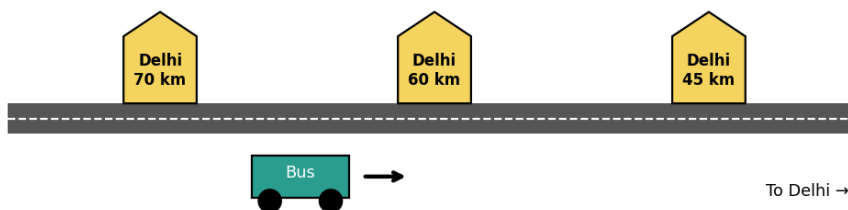
2. What is the distance between the school and the garden?

3. What is the bus stand called in this figure?

Picture 2 [3 marks]

Study the kilometre stones and the bus.

Fig. B2: Kilometre stones on the way to Delhi



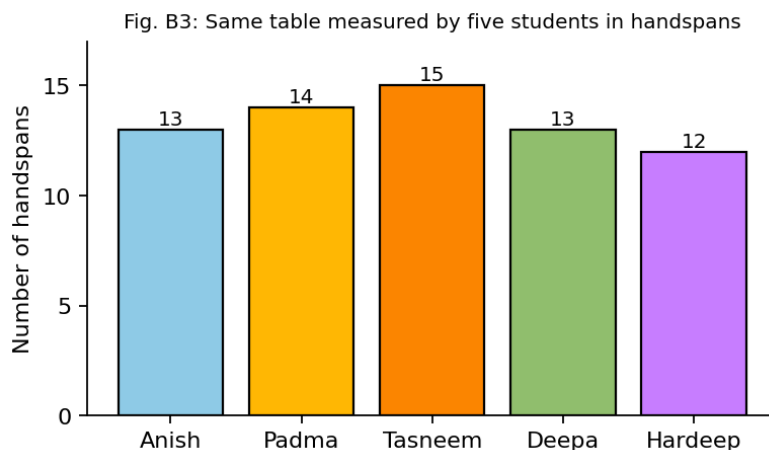
1. What is the reference point here?

2. How far will the bus travel from the '70 km' stone to the '45 km' stone?

3. Is the bus in motion with respect to Delhi? Why?

Picture 3 [3 marks]

Study the graph of handspans used by five students to measure the same table.



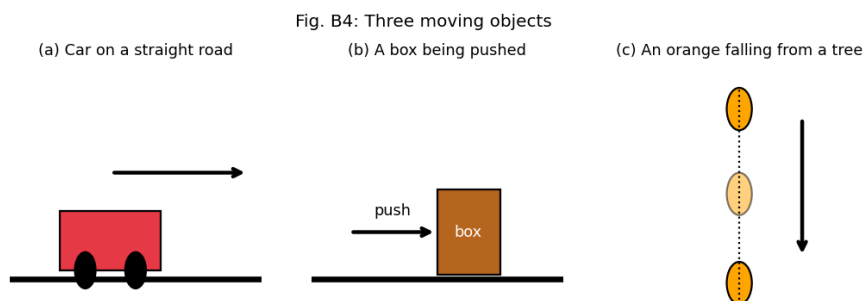
1. Who counted the largest number of handspans and who the smallest?

2. Whose handspan is probably the longest? Why?

3. Why did the students get different numbers? What is the remedy?

Picture 4 [3 marks]

Study the three moving objects.



1. Name the type of motion in (a), (b) and (c).

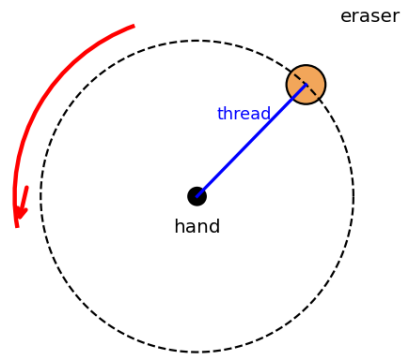
2. Define linear motion.

3. Give one more example of linear motion.

Picture 5 [3 marks]

Study the eraser tied to a thread being whirled by hand.

Fig. B5: An eraser tied to a thread is whirled



1. What is the type of motion of the eraser?

2. Is this motion periodic? Why?

3. Give one other example of circular motion.

ANSWER KEY – SET B

Picture 1

1. 2 km.
2. $5\text{ km} - 2\text{ km} = 3\text{ km}$.
3. The reference point.

Picture 2

1. Delhi.
2. $70\text{ km} - 45\text{ km} = 25\text{ km}$.
3. Yes, its distance from Delhi is changing with time.

Picture 3

1. Tasneem the largest (15) and Hardeep the smallest (12).
2. Hardeep's, because a longer handspan covers the table in fewer counts.
3. Handspans differ in size. Using a standard unit like the metre with a scale removes the difference.

Picture 4

1. All three show linear motion (motion along a straight line).
2. When an object moves along a straight line, its motion is called linear motion.
3. A train on a straight track, or a marching line of students on a straight road.

Picture 5

1. Circular motion.
2. Yes, the eraser goes around the same circular path again and again after a fixed time.
3. A merry-go-round.

CLASS 6 SCIENCE – PICTURE-BASED QUESTIONS – SET C

Chapter 5: Measurement of Length and Motion (NCERT Curiosity)

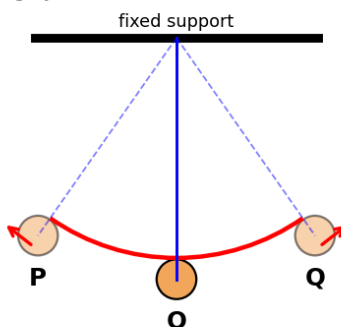
Name: _____ Class: 6 ____ Date: _____ Marks: _____ / 15

Look at each picture carefully and answer the three questions that follow. Each question carries 1 mark.

Picture 1 [3 marks]

Study the eraser hung by a thread and released from position P.

Fig. C1: An eraser hung by a thread and released from P (O is the rest position)



1. Name the type of motion of the eraser between P and Q.

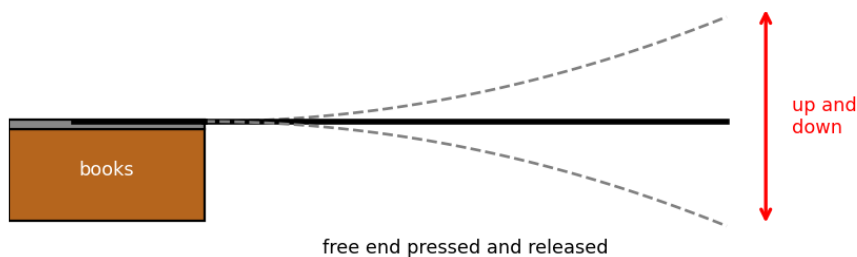
2. Which position is the rest position?

3. Give one example of the same type of motion.

Picture 2 [3 marks]

Study the metal strip clamped to a table.

Fig. C2: A metal strip clamped to a table



1. What happens when the free end is pressed and released?

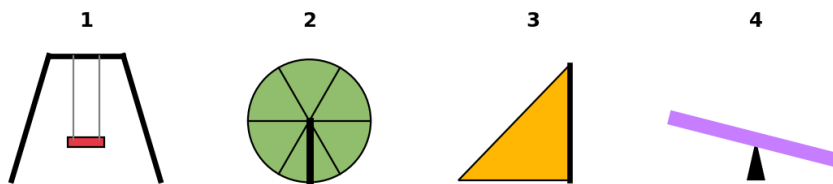
2. Name this type of motion.

3. Is it periodic? Give a reason.

Picture 3 [3 marks]

Study the four things in a children's park.

Fig. C3: Things in a children's park: 1 = Swing, 2 = Merry-go-round, 3 = Slide, 4 = See-saw



1. Name the motion of 1 (swing) and 4 (see-saw).

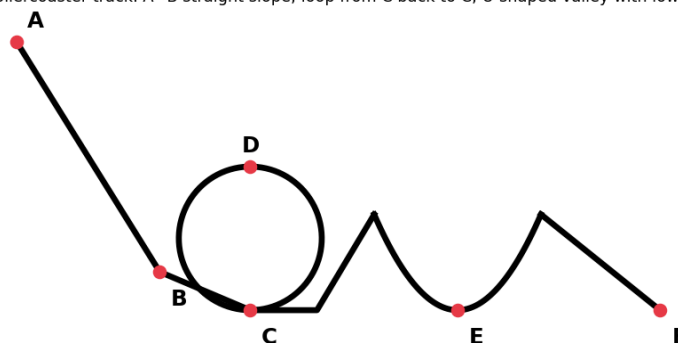
2. Name the motion of 2 (merry-go-round).

3. Name the motion of a child on slide 3 sliding down.

Picture 4 [3 marks]

Study the rollercoaster track. A ball starts at A and leaves at F.

Fig. C4: A rollercoaster track. A→B straight slope; loop from C back to C; U-shaped valley with lowest point E



1. Name the type of motion of the ball from A to B.

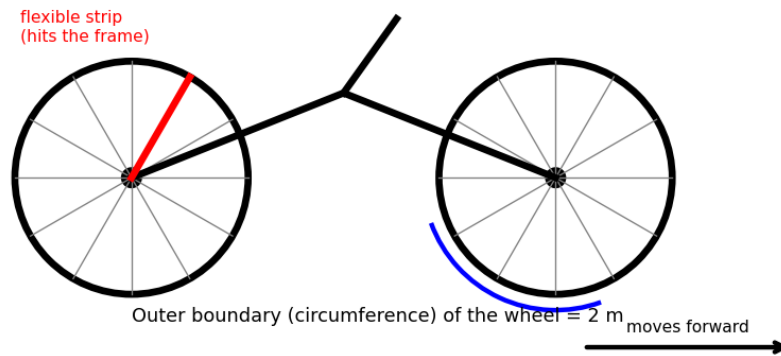
2. Which portion of the track gives circular motion?

3. Which portion gives oscillatory (to-and-fro) motion if the ball has less speed?

Picture 5 [3 marks]

Study the bicycle wheel used to measure distance. The wheel's outer boundary is 2 m long.

Fig. C5: Measuring distance with a bicycle wheel



1. What is the length of the outer boundary of the wheel in centimetres?

2. If the wheel makes 100 turns, how far does the cycle move?

3. What tool can be used to measure the boundary of the wheel?

ANSWER KEY – SET C

Picture 1

1. Oscillatory motion (to and fro).
2. O.
3. A swing.

Picture 2

1. It moves up and down about its original position.
2. Oscillatory motion.
3. Yes, it repeats its movement after a fixed interval of time.

Picture 3

1. Oscillatory motion.
2. Circular motion.
3. Linear motion.

Picture 4

1. Linear motion (along a straight slope).
2. The loop through C and D.
3. The U-shaped valley around E.

Picture 5

1. $2 \times 100 = 200$ cm.
2. 100×2 m = 200 m.
3. A string or thread, then a scale.