

Fully-Worked Solutions

PRACTICE 8

Section A

- The locus of a set of points that are of constant distance from a fixed point in a plane is a circle.
Answer: B
- When the triangle is rotated through 360° about the line PQ , the locus is a cone.
Answer: C
- The locus of the centre, C of the disc is a straight line.
Answer: D

- Point D is 3 cm from P and 2 cm from Q .

Answer: D

- Locus of points that are constant distance from a straight line PQ is a pair of parallel lines.

Answer: B

- Point C fulfils the conditions that it is 4 cm from S and equidistant from lines SP and SR .

Answer: C

- Point A fulfils the conditions that it is 2 units from the line MN and lies on the angle bisector of $\angle MKN$.

Answer: A

Section B

- (a) (i)

A set of points that are of constant distance from a straight line in a plane.

- (ii)

A set of points that are of constant distance from a fixed line in three-dimensional space.

Cylinder

Sphere

Straight line

Arc

- (b) (i) The locus of the movement of PQ is the curved surface of a

sphere

circular cylinder

cone

- (ii) The locus of the movement of semicircle ACB is the curved surface of a

sphere

circular cylinder

hemisphere

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- The locus of the tip of a javelin when it is thrown is an arc of a circle.

$\times$

- The locus of a circle that is rotated through 180° about its diameter is the surface of a sphere.

$\checkmark$

- The locus of a falling coconut is a straight line.

$\checkmark$

- The locus of a moving minute hand on a clock is a circle.

$\checkmark$

