Fully-Worked Solutions

PRACTICE 8

Section A

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

- 4 Point *D* is 3 cm from *P* and 2 cm from *Q*. *Answer*: **D**
- 5 Locus of points that are constant distance from a straight line *PQ* is a pair of parallel lines. *Answer*: B
- 6 Point *C* fulfils the conditions that it is 4 cm from *S* and equidistant from lines *SP* and *SR*. *Answer*: C
- 7 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**



sphere circular cylinder cone	
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(ii) The locus of the movement of semicircle ACB is the curved surface of a

sphere	circular cylinder	hemisphere
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 (a)
 The locus of the tip of a javelin when it is thrown is an arc of a circle.
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 (b)
 The locus of a circle that is rotated through 180° about its diameter is the surface of a sphere.
 ✓

 (c)
 The locus of a falling coconut is a straight line.
 ✓

 (d)
 The locus of a moving minute hand on a clock is a circle.
 ✓



- (b) (i) The locus of a point W that is always 3 cm from a fixed point P in a plane is a sphere of radius 3 cm with centre P.
 - (ii) The locus of a point X that is always equidistant from two fixed points P and Q is the perpendicular bisector of the line connecting P and Q.



4 (a) The point that is equidistant from PQ and QR:

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Α	B	С	D	

(b) The point that is equidistant from *PS* and *QR*:

A B	С	\bigcirc
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(c) The straight line that is equidistant from *PQ* and *RS*:

(d) The straight line that is equidistant from *PQ* and *PS*:

(PR)	QS	UV	TW	





- (b) (i) *X* is the locus of a point that is always equidistant from lines *KL* and *KN*.
 - (ii) *Y* is the locus of a point that is always equidistant from the points *K* and *L*.





