

Fully-Worked Solutions

PRACTICE 8

Formative Practice

- 1 A Correct
B Wrong
C Wrong
D Wrong

Answer: A

- 2 Locus of a point at the end blade of a moving fan is a circle.

- 3 (a) A tennis ball is hit by a player.
 (b) A child playing on a swing.
 (c) A ball is thrown at angle 45° from the horizontal line.
 (d) The centre of the wheel of a bicycle that moves along a straight level road.
- An arc of a circle
A curve
A horizontal straight line

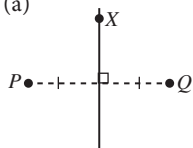
- 4 (a) Locus of a point that moves in a three-dimensional space such that its distance from a fixed point is a constant.
Sphere
(b) Locus of a straight line that moves in a three-dimensional space such that its distance from a fixed straight line is a constant.
Cylinder

- 5 A circle with centre T and radius 2 cm.

Answer: D

- 6 A circle with centre A and radius 4 cm.

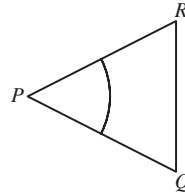
- 7 (a)



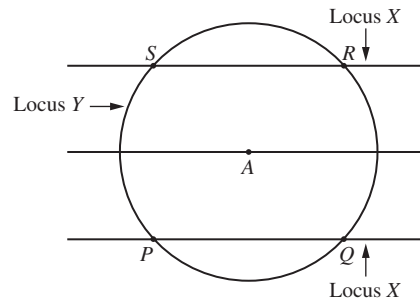
- 8 The locus of point X is the straight line TR .

Answer: C

9



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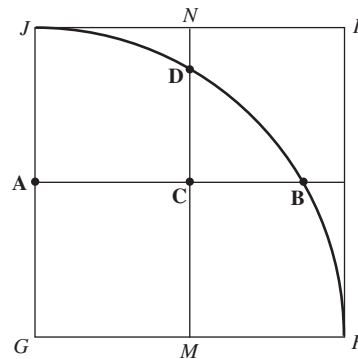


The loci X and Y intersect at points P , Q , R and S .

$\therefore$ The number of points of intersection of loci X and Y is 4.

Answer: C

11



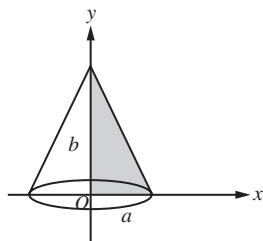
The locus of point P is the arc $HBDJ$ and the locus of point Q is the straight line MN .

$\therefore$ The point of intersection of loci P and Q is the point D .

Answer: D

Summative Practice

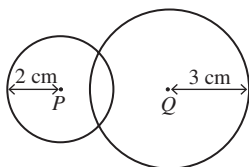
1



The shape of the locus produced is a right cone with radius a units and height b units.

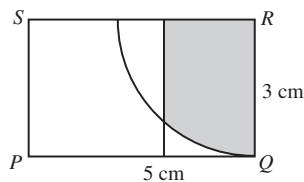
Answer: A

2



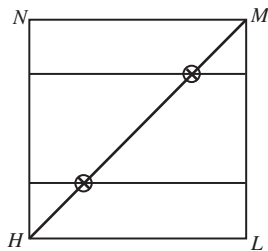
Answer: D

3



Answer: B

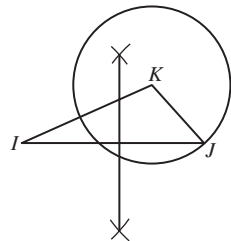
4



The number of points of intersection is 2.

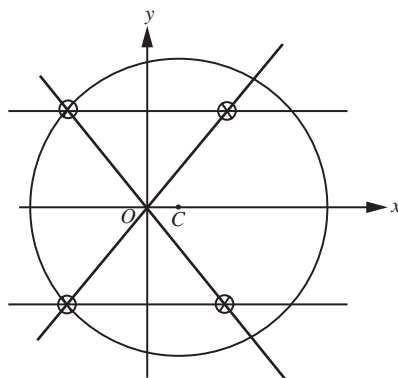
Answer: B

5

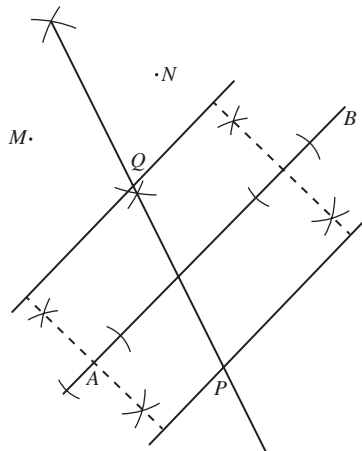


Answer: A

6

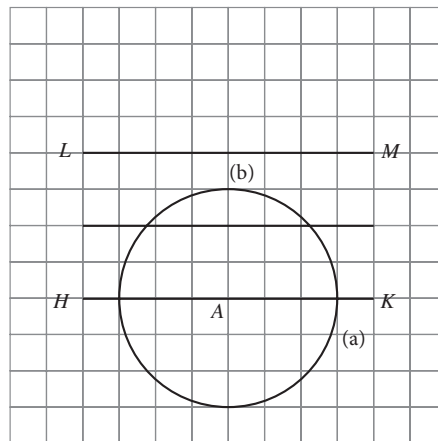


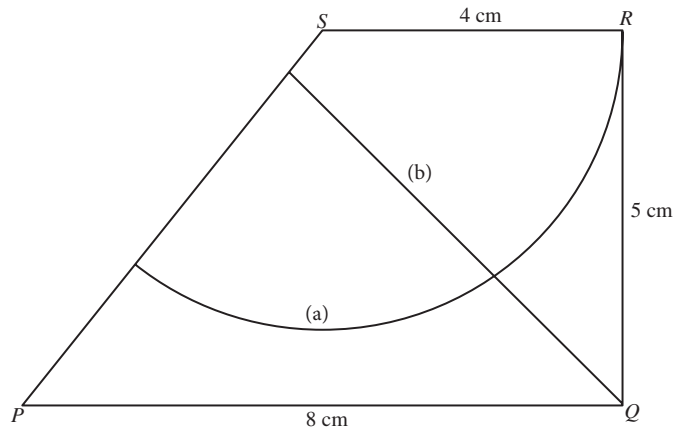
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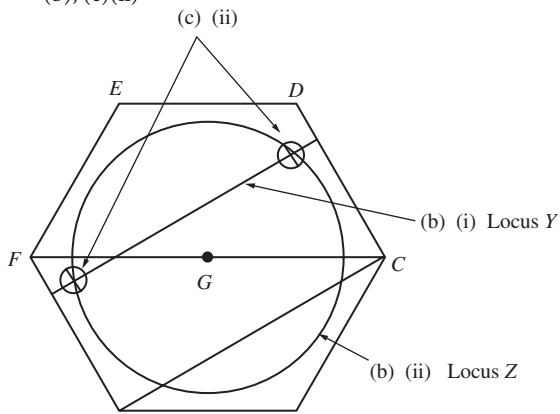
The possible positions of the supermarket are at P and Q .

8





- 10 (a) Straight line AGD
(b), (c)(ii)



- (c) (i) Number of points of intersection of locus X and locus Y is 1.

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