

# 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. Satu lengkok bulatan  
An arc of a circle
- (b) A child playing on a swing. Satu lengkung  
A curve
- (c) A ball is thrown at angle  $45^\circ$  from the horizontal line. Satu garis lurus mengufuk  
A horizontal straight line
- (d) The centre of the wheel of a bicycle that moves along a straight level road.

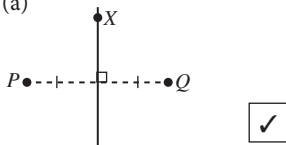
- 4 (a) Locus of a point that moves in a three-dimensional space such that its distance from a fixed point is a constant.  
 Sphere
- (b) Locus of a straight line that moves in a three-dimensional space such that its distance from a fixed straight line is a constant.  
 Cylinder

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

Answer: D

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

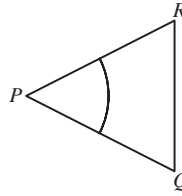
- 7 (a)



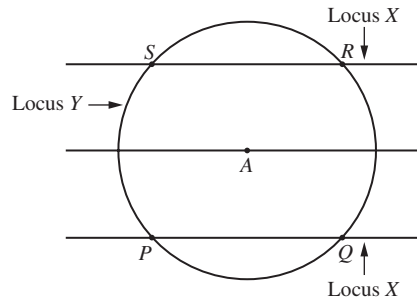
- 8 The locus of point  $X$  is the straight line  $TR$ .

Answer: C

- 9



- 10

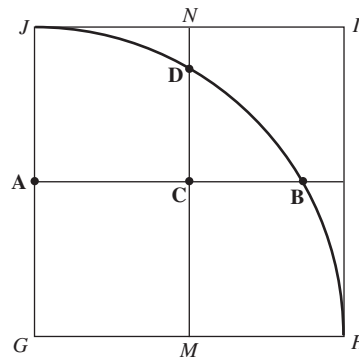


The loci  $X$  and  $Y$  intersect at points  $P$ ,  $Q$ ,  $R$  and  $S$ .

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

Answer: C

- 11



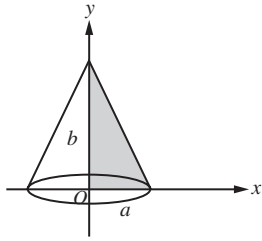
The locus of point  $P$  is the arc  $HBDJ$  and the locus of point  $Q$  is the straight line  $MN$ .

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

Answer: D

**Summative Practice**

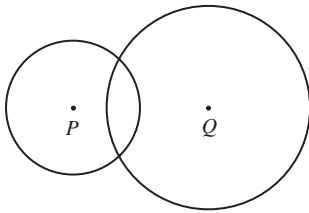
1



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

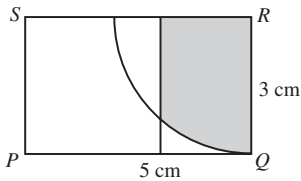
Answer: A

2



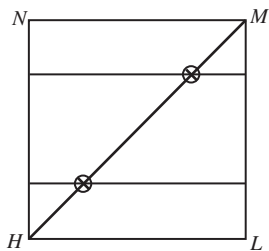
Answer: D

3



Answer: B

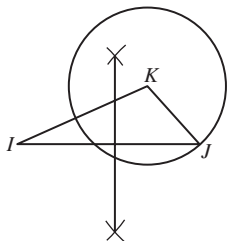
4



The number of points of intersection is 2.

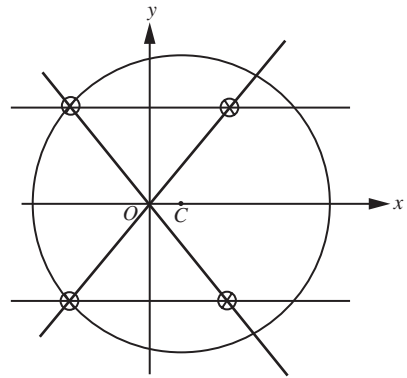
Answer: B

5

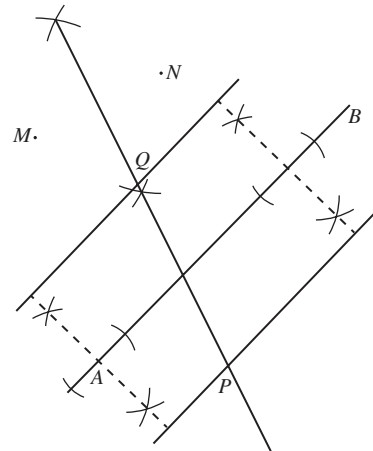


Answer: A

6

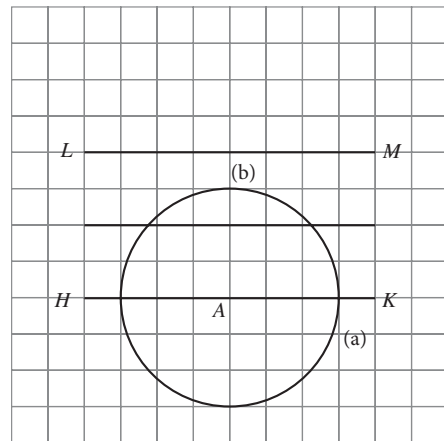


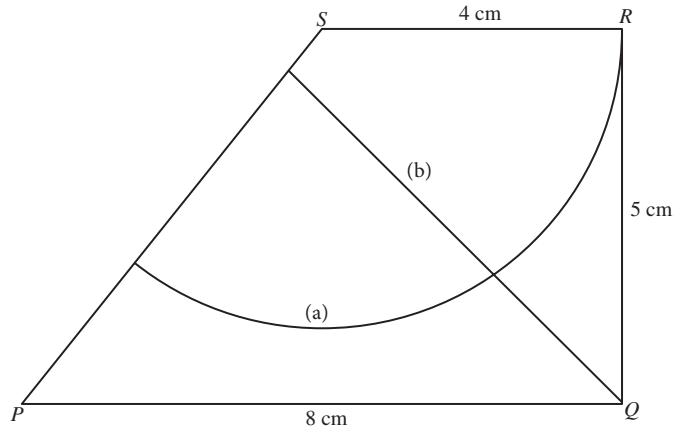
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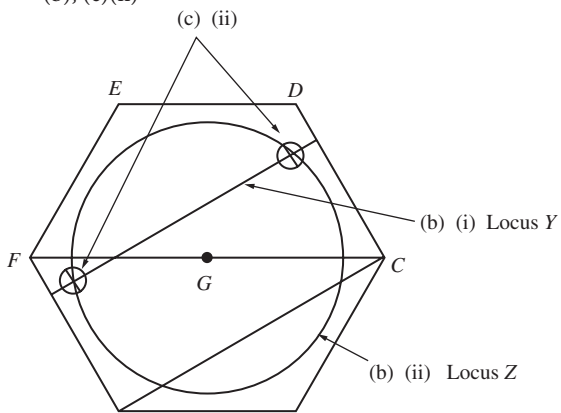
The possible positions of the supermarket are at  $P$  and  $Q$ .

8





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



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

11

