

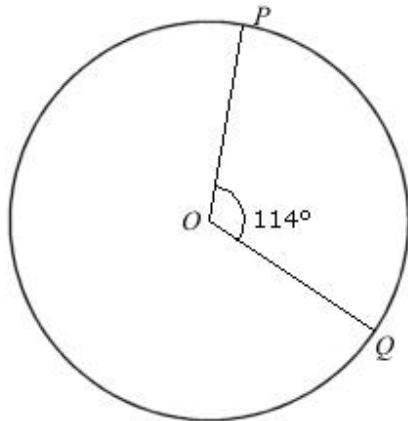
INTENSIVE REVISION QUESTIONS (ERQ)
SET 8-CIRCULAR MEASURE

Name :

Form :

Teacher:

1.

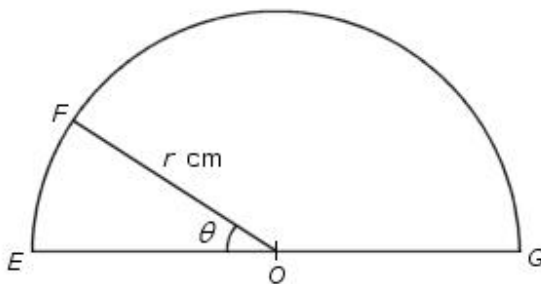


The diagram shows a circle with centre O and radius 2 cm. Find

- (a) the minor angle POQ in radians,
(b) the major arc PQ .

[4 marks]

2.



The diagram shows a semicircle $OEF G$ with centre O and radius r cm.

The perimeter of the sector OEF = the length of FG . Find

- (a) the value of θ in radians,
(b) the value of r , if the arc length $FG = 46.27$ cm.

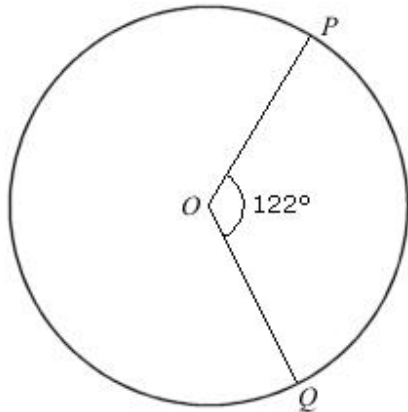
[4 marks]

3. (a) Convert 1.2 rad. to degrees.
(b) Find the perimeter of a semicircle of diameter 28 cm.

[2 marks]

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4.

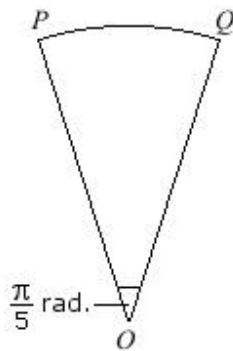


The diagram shows a circle with centre O and radius 12 cm. Find

- (a) the minor angle POQ in radians,
- (b) the major arc PQ .

[4 marks]

5.



The diagram shows a sector OPQ with centre O and radius r cm.

Given that the arc length PQ is 5.65 cm, find

- (a) the value of r ,
- (b) the area of the sector OPQ .

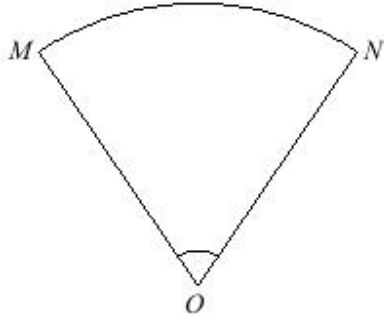
[4 marks]

- 6. (a) Convert 3.86 rad. to degrees.
- (b) Find the perimeter of a semicircle of diameter 42 cm.

[2 marks]

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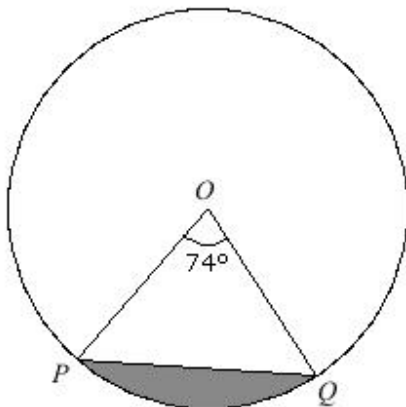
7.



The diagram shows a sector OMN with centre O and radius r cm.
The arc length $MN = 1.2r$ cm.

- (a) Find the value of $\angle MON$ in radians.
(b) Given that the area of the sector is 117.6 cm^2 , find the value of r . [4 marks]

8.

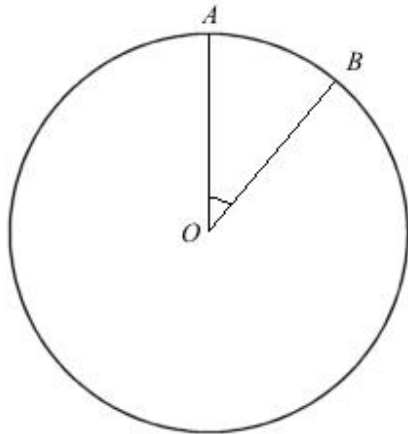


The diagram shows a circle with centre O . The perimeter of the minor segment is 49.9 cm. Find the radius of the circle. [3 marks]

9. (a) Convert 226° to radians.
(b) Find the perimeter of a semicircle of radius 63 cm. [2 marks]

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10.

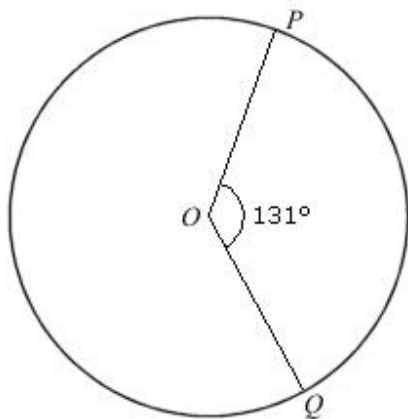


The diagram shows a circle with centre O and radius 3 cm. The major arc length AB is 8 times the minor arc length AB . Find

- (a) the value of the minor sector $\angle AOB$ in radians,
- (b) the perimeter of the major sector OAB .

[4 marks]

11.



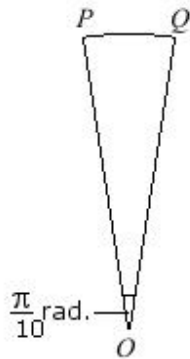
The diagram shows a circle with centre O and radius 5 cm. Find

- (a) the minor angle POQ in radians,
- (b) the major arc PQ .

[4 marks]

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12.

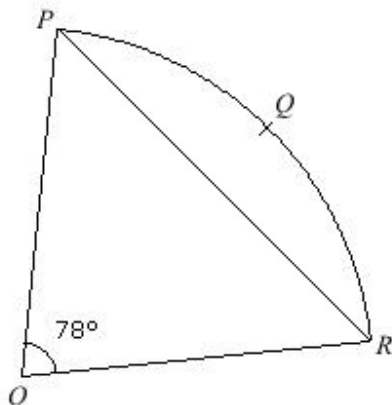


The diagram shows a sector OPQ with centre O and radius r cm. Given that the arc length PQ is 5.97 cm, find

- (a) the value of r ,
(b) the area of the sector OPQ . [4 marks]

13. (a) Convert 6.09 rad. to degrees.
(b) Find the perimeter of a semicircle of diameter 112 cm. [2 marks]

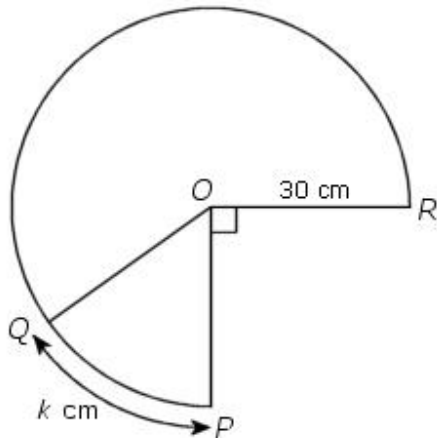
14.



The diagram shows a sector with centre O and radius 16 cm. Find the area of the segment PQR . [3 marks]

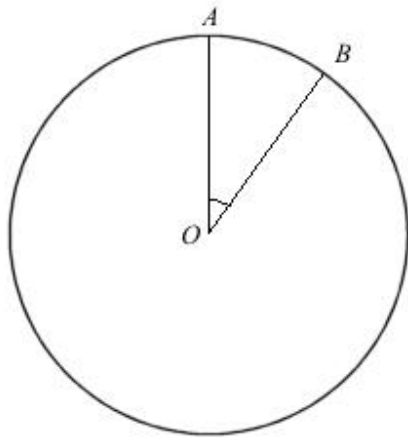
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15.



The diagram shows a sector with centre O . Given radius = 30 cm, the minor arc length $PQ = k$ cm. Express the major arc length QR in terms of k . [3 marks]

16.

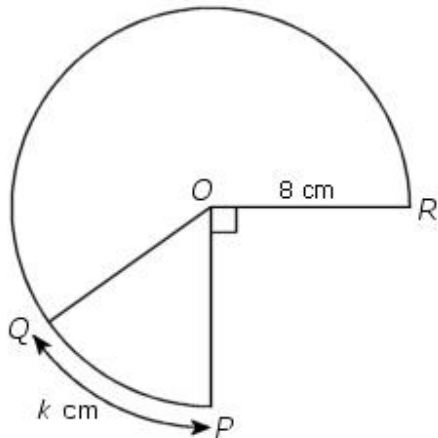


The diagram shows a circle with centre O and radius 4 cm. The major arc length AB is 9 times the minor arc length AB . Find

(a) the value of the minor sector $\angle AOB$ in radians, [4 marks]
 (b) the perimeter of the major sector OAB .

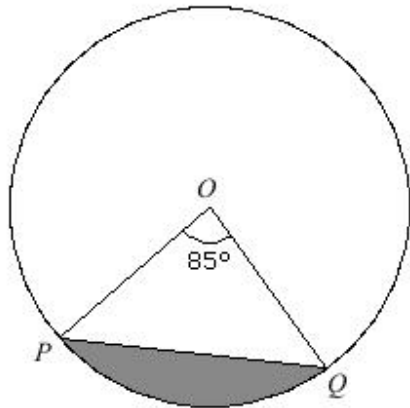
17. (a) Convert 152° to radians. [2 marks]
 (b) Find the perimeter of a semicircle of radius 28 cm.

18.



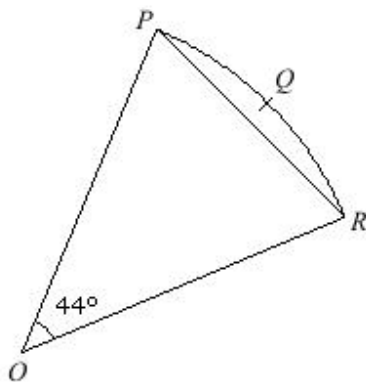
The diagram shows a sector with centre O . Given radius = 8 cm, the minor arc length $PQ = k$ cm. Express the major arc length QR in terms of k . [3 marks]

19.



The diagram shows a circle with centre O . The perimeter of the minor segment is 53.86 cm. Find the radius of the circle. [3 marks]

20.



The diagram shows a sector with centre O and radius 16 cm.

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Find the area of the segment PQR .

[3 marks]

Answers:

1. (a) 1.99 rad.
(b) 8.59 cm
2. (a) 0.5708 rad.
(b) 18 cm
3. (a) 68.8°
(b) 72 cm
4. (a) 2.129 rad.
(b) 49.85 cm
5. (a) 9 cm
(b) 25.45 cm^2
6. (a) 221.2°
(b) 108 cm
7. (a) 1.2 rad.
(b) 14 cm
8. 20 cm
9. (a) 3.944 rad.
(b) 324 cm
10. (a) 0.698 rad.
(b) 22.76 cm
11. (a) 2.286 rad.
(b) 19.98 cm
12. (a) 19 cm
(b) 56.71 cm^2
13. (a) 348.9°
(b) 288 cm
14. 49.05 cm^2
15. $45\pi - k$
16. (a) 0.628 rad.
(b) 30.62 cm
17. (a) 2.653 rad.
(b) 144 cm
18. $12\pi - k$
19. 19 cm
20. 9.38 cm^2

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