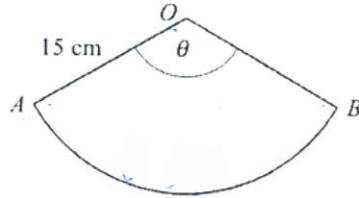


HOMEWORK-FORMATIVE

Name, surname:

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1.



The diagram shows sector OAB of a circle, centre O , radius 15 cm.

Given that $\angle AOB = \theta$ radians and that the length of the arc AB is 32.1 cm,

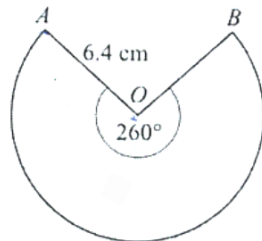
a find the value of θ ,

(2)

b find the area of sector OAB .

(2)

2.



The diagram shows the major sector OAB of a circle, centre O , radius 6.4 cm.

The reflex angle subtended by the major arc AB at O is 260° .

a Express 260° in radians, correct to 3 decimal places.

(1)

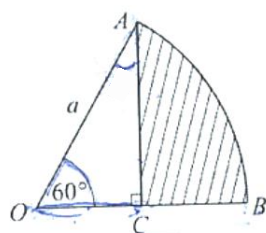
b Find the perimeter of the major sector OAB .

(3)

c Find the area of the major sector OAB .

(2)

3.



The diagram shows the circular sector OAB , centre O . The point C lies on OB such that AC is perpendicular to OB .

Given that $OA = a$, and that $\angle AOB = 60^\circ$,

- a find the area of sector OAB in terms of a and π . (3)
- b find the length OC in terms of a . (1)
- c show that the area of the shaded region bounded by the arc AB and the straight lines AC and BC is given by $\frac{1}{24}a^2(4\pi - 3\sqrt{3})$. (5)