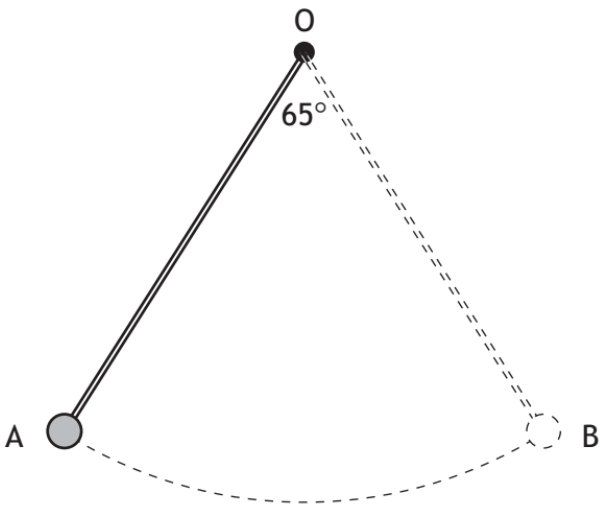
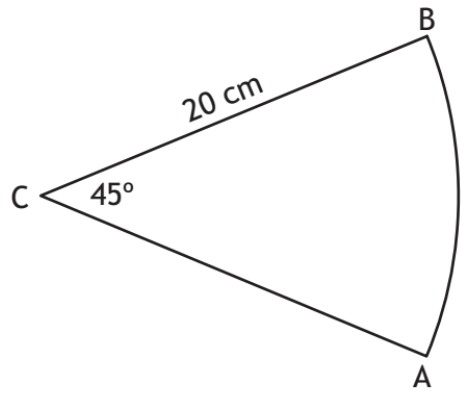


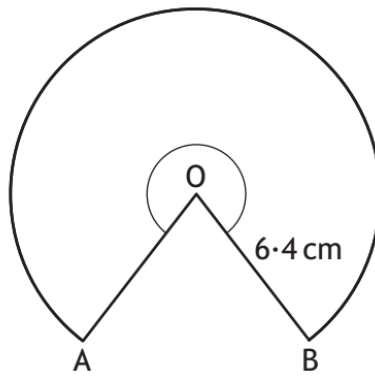
Arcs & Sectors

YEAR	PAPER	QUESTION
2015	2	<p>The pendulum of a clock swings along an arc of a circle, centre O.</p>  <p>The pendulum swings through an angle of 65°, travelling from A to B. The length of the arc AB is 28.4 centimetres. Calculate the length of the pendulum.</p> <p style="text-align: right;">4</p>
2016	1	<p>The diagram shows a sector of a circle, centre C.</p>  <p>The radius of the circle is 20 centimetres and angle ACB is 45°. Calculate the area of the sector.</p> <p>Take $\pi = 3.14$.</p> <p style="text-align: right;">3</p>

2017

2

The diagram below shows part of a circle, centre O.



The radius of the circle is 6.4 centimetres.

Major arc AB has length 31.5 centimetres.

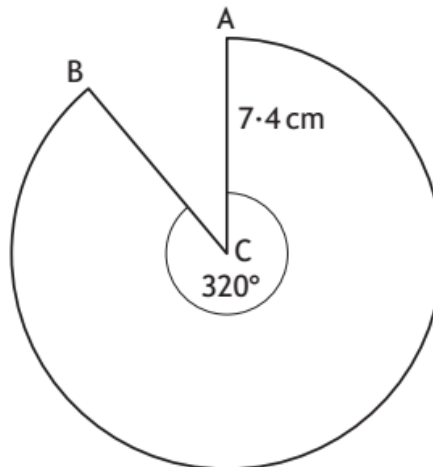
Calculate the size of the reflex angle AOB.

3

2018

2

The diagram below shows a sector of a circle, centre C.



The radius of the circle is 7.4 centimetres.

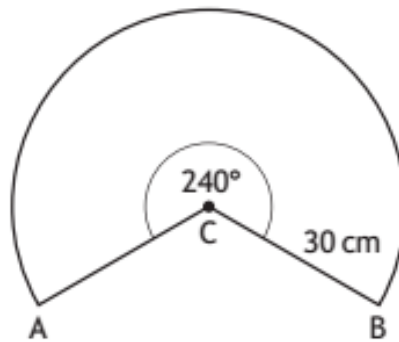
Calculate the length of the major arc AB.

3

2019

1

The diagram below shows a sector of a circle, centre C.



The radius of the circle is 30 centimetres.

Calculate the length of the major arc AB.

Take $\pi = 3.14$.

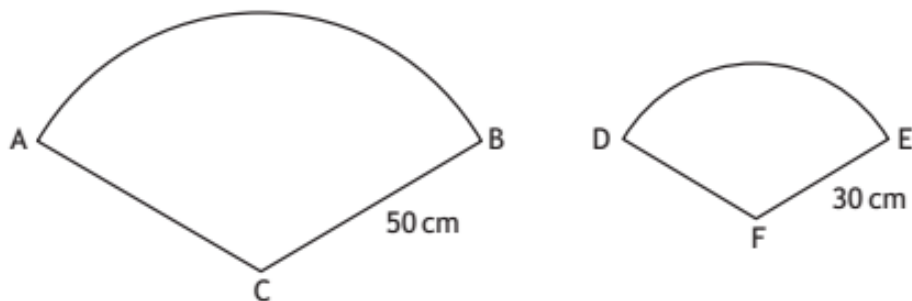
3

2019

2

In the diagram

- ABC is a sector of a circle, centre C
- DEF is a sector of a circle, centre F.



The sectors are mathematically similar.

The area of the larger sector, ABC, is 2750 square centimetres.

(a) Calculate the area of the smaller sector, DEF.

3

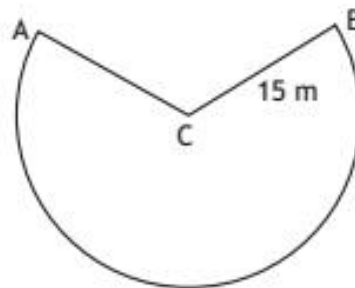
(b) Calculate the size of angle ACB.

3

An attraction at a theme park has a carriage attached to an arm.



The arm swings from A to B along the arc of a circle, centre C, as shown in the diagram below.



- The length of the arm, CB, is 15 metres.
- The length of the major arc, AB, is 69.4 metres.

Calculate the size of the reflex angle ACB.

3