

Name: _____

GCSE (1 – 9)

Sector Area and Arc Length

Instructions

- Use **black** ink or ball-point pen.
- Answer all Questions.
- Answer the Questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

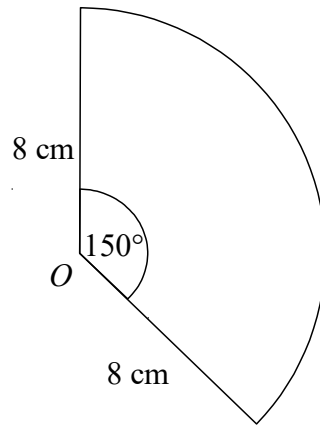
Information

- The marks for each Question are shown in brackets
– *use this as a guide as to how much time to spend on each Question.*

Advice

- Read each Question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every Question.
- Check your answers if you have time at the end

- 1 The diagram shows a sector, centre O .
The radius of the circle is 8 cm.
The angle of the sector is 150° .

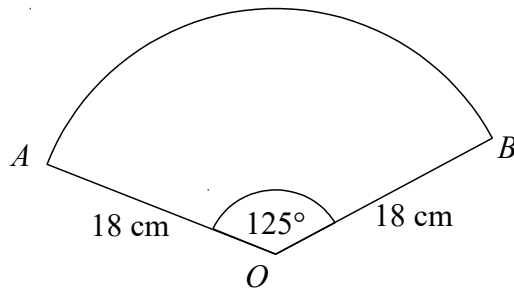


Calculate the area of the sector.
Give your answer correct to 3 significant figures.

..... cm²

(Total for Question 1 is 2 marks)

- 2 AOB is a sector of a circle, centre O and radius 18 cm.
The angle of the sector is 125° .

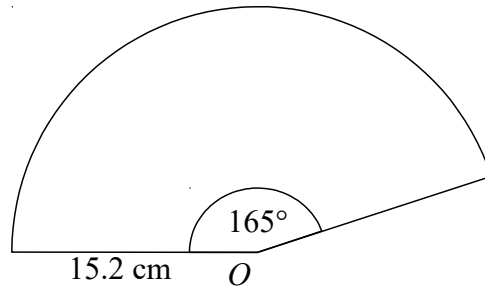


Calculate the length of the arc AB .
Give your answer in terms of π .

..... cm

(Total for Question 2 is 2 marks)

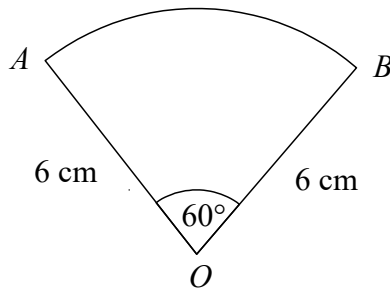
- 3 The diagram shows a sector, centre O .
The radius of the circle is 15.2 cm.
The angle of the sector is 165° .



Calculate the area of the sector.
Give your answer correct to 3 significant figures.

.....
(Total for Question 3 is 3 marks)

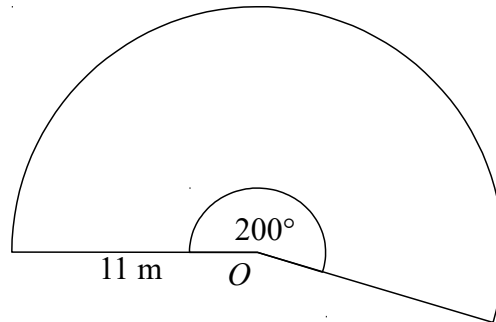
- 4 AOB is a sector of a circle, centre O and radius 6 cm.
The angle of the sector is 60° .



Find the length of the arc AB .
Give your answer in terms of π .

..... cm
(Total for Question 4 is 2 marks)

- 5 The diagram shows a sector, centre O .
The radius of the circle is 11 m.
The angle of the sector is 200° .

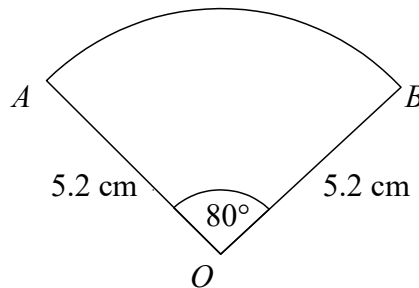


Calculate the area of the sector.
Give your answer correct to 3 significant figures.

..... m²

(Total for Question 5 is 2 marks)

- 6 AOB is a sector of a circle, centre O and radius 5.2 cm.
The angle of the sector is 80° .

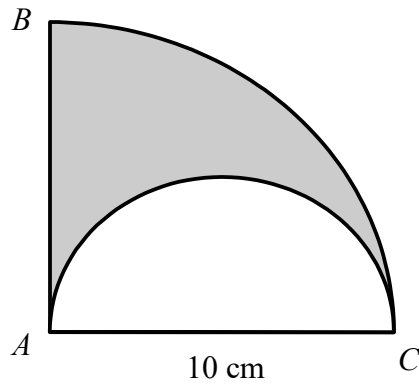


Find the **perimeter** of the sector.
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 6 is 3 marks)

- 7 *BAC* is a sector of a circle, centre *A*.
AC is the diameter of a semi circle.
AC is 10 cm.

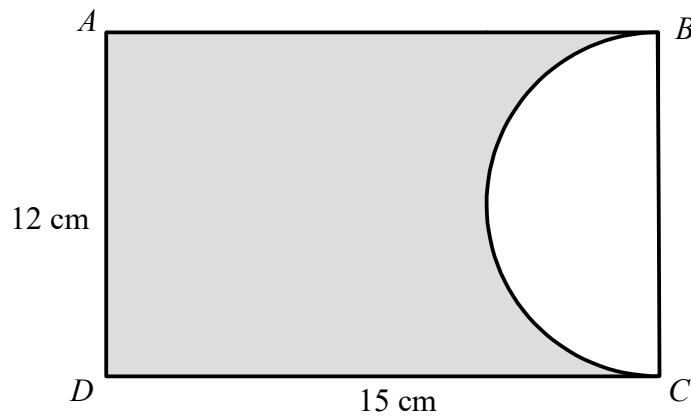


Find the area of the shaded region.
Give your answer in terms of π .

..... cm²

(Total for Question 7 is 4 marks)

- 8 The diagram shows a rectangle, $ABCD$, and a semi circle.
 BC is the diameter of a semi circle.

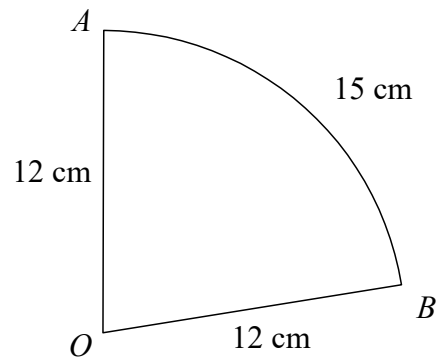


Calculate the percentage of the area of the rectangle that is shaded.
Give your answer correct to 1 decimal place.

..... %

(Total for Question 8 is 4 marks)

- 9 AOB is a sector of a circle, centre O and radius 12 cm.
The length of arc AB is 15 cm.

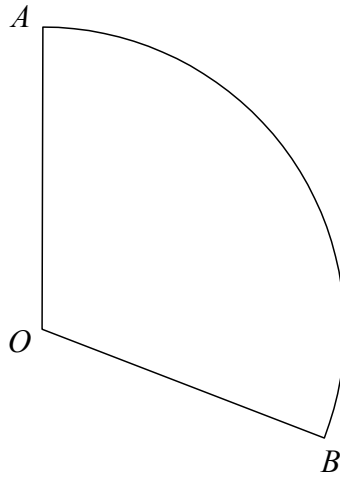


Find the area of the sector.

..... cm²

(Total for Question 9 is 4 marks)

- 10 AOB is a sector of a circle, centre O and radius 9 cm.
The length of arc AB is 6π cm.



Find the area of the sector.
Give your answer in terms of π .

..... cm^2

(Total for Question 10 is 4 marks)