

Name: _____

ASM Tuition Academy
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 you're working out**.

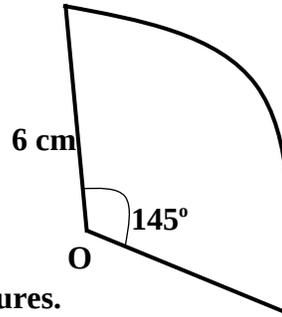
Information:

- 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 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 6 cm.
The angle of the sector is 145° .



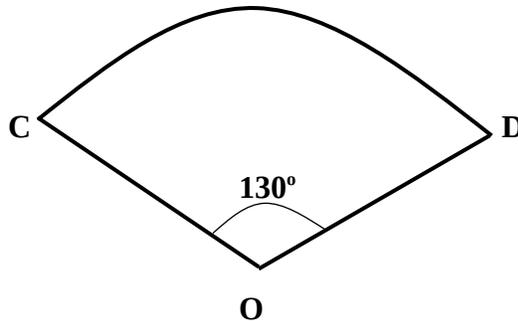
Calculate the area of the sector.
Give your answer correct to 3 significant figures.

_____ cm^2

(Total for question 1 is 2 marks)

2. COD is a sector of a circle, centre O and radius 20 cm.
The angle of the sector is 130° .

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

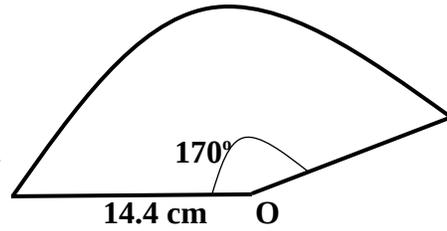


_____ cm

(Total for question 2 is 2 marks)

3. The diagram shows a sector, centre O.
The radius of the circle is 14.4 cm.
The angle of the sector is 170°

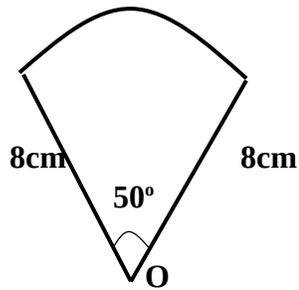
Calculate the area of the sector.
Give your answer correct to 3 significant figures.



(Total for question 3 is 3 marks)

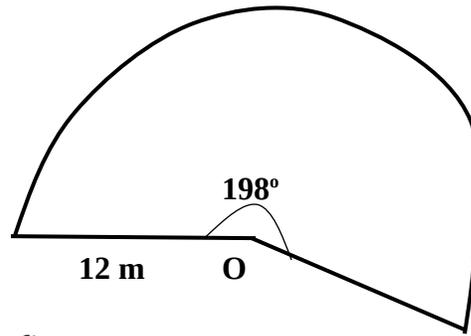
4. MON is a sector of a circle, centre O and radius 8cm.
The angle of the sector is 50° .

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



(Total for question 4 is 2 marks)

5. The diagram shows a sector, centre O.
 The radius of the circle is 12 m.
 The angle of the sector is 198° .



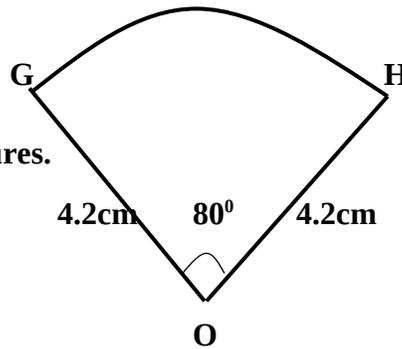
Calculate the area of the sector.
 Give your answer correct to 3 significant figures.

_____ m²

(Total for question 5 is 2 marks)

6. GOH is a sector of a circle, centre O and radius 4.2 cm.
 The angle of the sector is 80° .

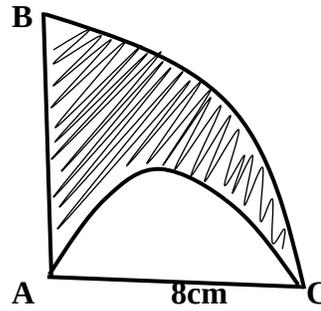
Find the perimeter of the sector.
 Give your answer correct to 3 significant figures.



_____ 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 8 cm.

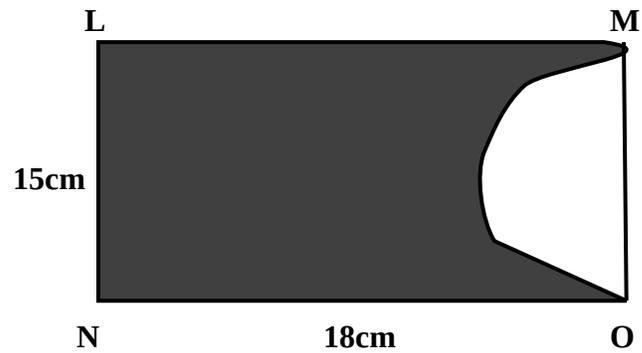


Find the area of the shaded region.
Give your answer in terms of π .

_____ cm^2

(Total for question 7 is 4 marks)

8. The diagram shows a rectangle, LMNO, and a semi-circle. MN is the diameter of a semi-circle.

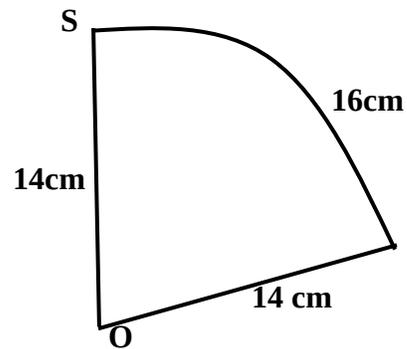


Calculate the percentage of the area of the rectangle that is shaded.
Give your answer correct to 1 decimal place.

_____ %

(Total for question 8 is 4 marks)

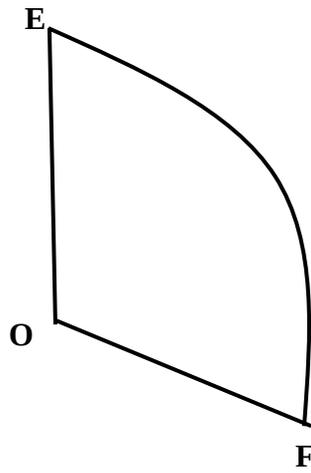
9. SOT is a sector of a circle, centre O and radius 14cm.
The length of arc ST is 16 cm.



Find the area of the sector.
Give your answer in 3 significant figures.

(Total for question 9 is 4 marks)

10. EOF is a sector of a circle, centre O and radius 10cm.
The length of arc EF is 8π cm.



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

_____ cm^2

(Total for question 10 is 4 marks)
