

8300

GCSE MATHEMATICS

Foundation and Higher tier – Questions by Topic

Geometry

Circles – Finding the circumference of circles

v1.0

Name _____

Materials

For this paper you must have:

- Mathematical instruments
- A calculator



Information

- The marks for questions are shown in brackets

Advice

- In all calculations, show clearly how you work out your answer

Q1.

Work out the circumference of a circle, radius 4.2 cm.
Give your answer to 1 decimal place.

(Total 3 marks)

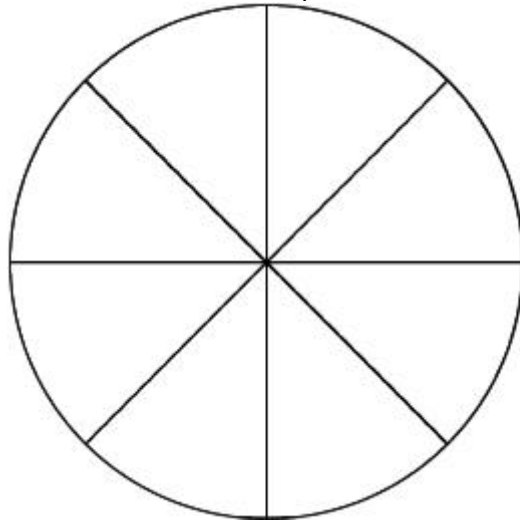
Q2.

The centre circle on a football pitch has radius 9.15 metres.
Work out the circumference of the circle.

(Total 2 marks)

Q3.

A wheel is made of a circular rim and 8 spokes as shown.



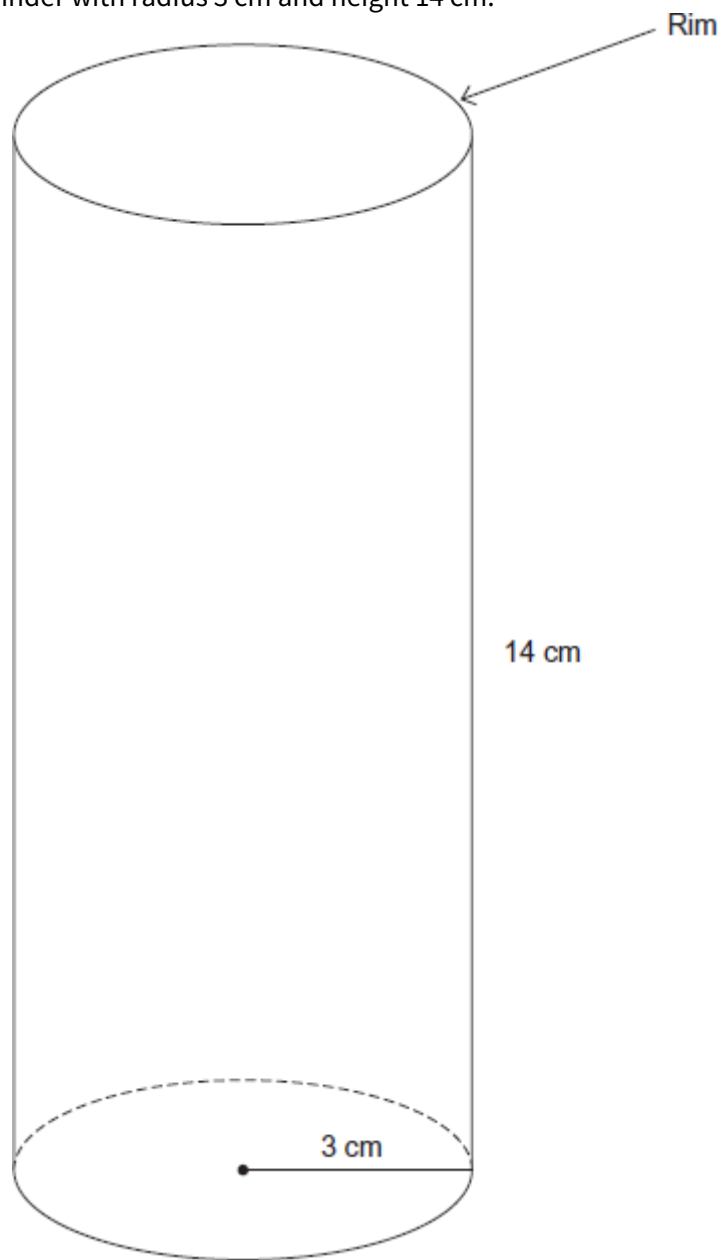
Not drawn
accurately

The length of each spoke is 37 cm
Work out the **total** length of the rim and spokes.

(Total 3 marks)

Q4.

The diagram shows a full-size drawing of a drinking glass.
The glass is a cylinder with radius 3 cm and height 14 cm.



A man claims that the circumference of the rim is greater than the height of the glass.
Is he correct?
You **must** show your working.

(Total 2 marks)

Circles – Finding the circumference of circles – Cross topic questions.

Q5.

A wheel has diameter 0.7 m

(a) Work out the circumference.

(2)

(b) Work out the number of complete turns when the wheel travels 1.6 km
You **must** show your working.

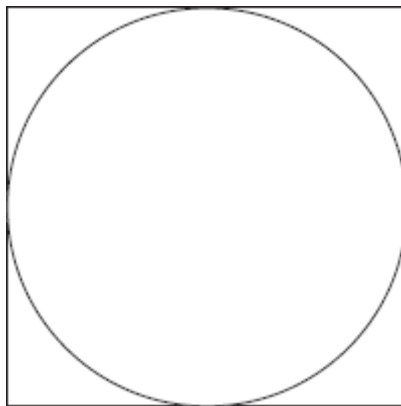
(4)

(Total 6 marks)

Q6.

The area of this square is 36 cm^2

Not drawn accurately



Work out the circumference of the circle.

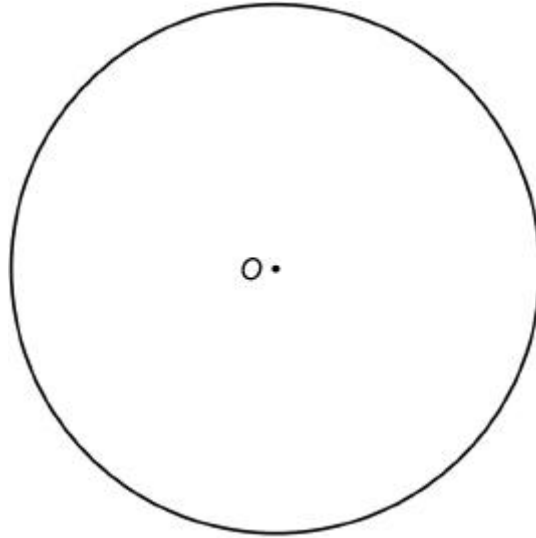
(Total 3 marks)

Q7.

- (a) A circle has radius 4.2 cm
Work out the length of the circumference.
Give your answer to 1 decimal place.

(3)

- (b) The circle below has centre O .
Draw a sector on the circle.



(1)

(Total 4 marks)

Q8. (H)

The distance from the Earth to the Sun is 93 million miles.

Assume

it takes 365 days for the Earth to travel once around the Sun
the Earth travels in a circle with the Sun at the centre.

- (a) Work out the average speed of the Earth in miles per hour.

(4)

- (b) It actually takes $365\frac{1}{4}$ days for the Earth to travel once around the Sun.
How does this affect your answer to part (a)?

(1)

(Total 5 marks)