

# Summer Term Maths Year 10

## Area of a sector

Day

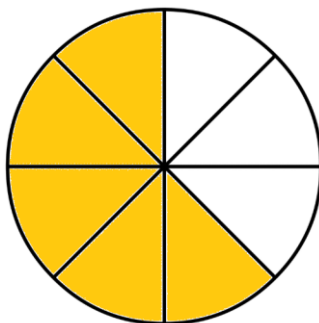
3

Week 4

1

The area of this circle is  $80 \text{ cm}^2$ .

The circle is divided into 8 equal parts.

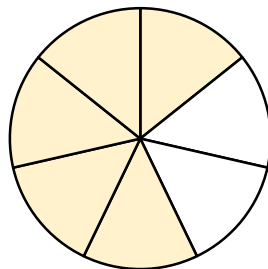


(a) What is the area of the shaded sector?  $50 \text{ cm}^2$

(b) What is the area of the non shaded sector?  $30 \text{ cm}^2$

2

The area of this circle is  $56\pi \text{ cm}^2$ . The circle is divided into 7 equal parts.



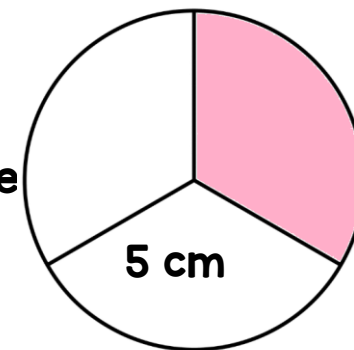
What is the area of the shaded part of the circle in terms of pi?  $40\pi \text{ cm}^2$

3

The radius of a circle is 5 cm. It has been divided into 3 equal sectors.

Find the area of one of the sectors to 3 s.f.

$26.2 \text{ cm}^2$

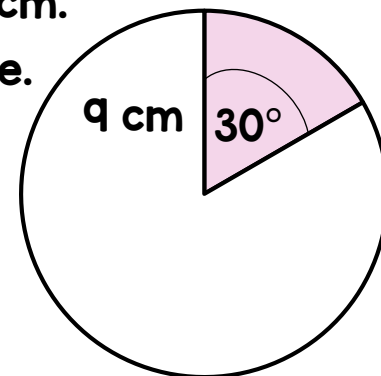


4

The radius of a circle is 9 cm. Here is a sector of a circle.

(a) What fraction of the circle is shaded?  $\frac{1}{12}$

(b) Find the area of the shaded sector to 3 s.f.  $21.2 \text{ cm}^2$



# Summer Term Maths Year 10

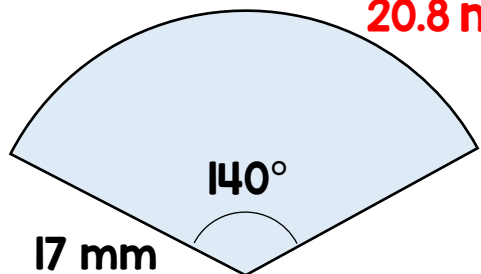
## Area of a sector

Day  
3

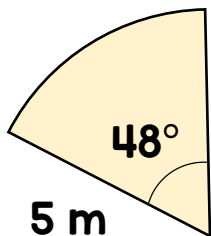
Week 4

- 5** Find the area of each of these sectors.  
Give your answers to 3 s.f.

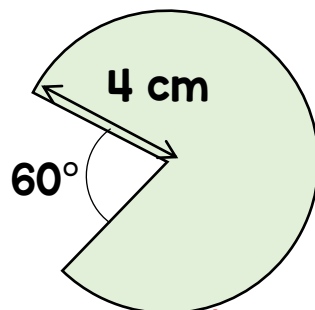
- (a)  **$20.8 \text{ mm}^2$**



- (b)  **$10.5 \text{ m}^2$**



- (c)  **$41.9 \text{ cm}^2$**



- (d) Work out the area of (b) in terms of pi.  
 **$\frac{10}{3} \pi \text{ m}^2$**

- 6** A sector has an area of  $60 \text{ cm}^2$

- (a) Find the angle of the sector if the radius is 8 cm.  **$107^\circ$**

- (b) Find the radius if the angle of the sector is  $72^\circ$   **$9.77 \text{ cm}$**

- 7** A windscreen wiper has a length of 40 cm and turns through an angle of  $105^\circ$ . The windscreen has an area of  $0.2 \text{ m}^2$ . What percentage of the windscreen is cleared?  **$73\%$**

