

(C2-6.3) Name:

Homework Questions 3 – Finding the Area of a Sector

1. Calculate the area of the sectors, given your answer correct to 3 sf

a) $r = 4\text{cm}$ $\theta = \frac{5\pi}{2}$

b) $r = 8\text{cm}$ $\theta = \frac{9\pi}{4}$

c) $r = 12\text{cm}$ $\theta = 8.6 \text{ rads}$

2. Calculate the area of these sectors, give your answers in terms of π

a) $r = 5\text{cm}$ $\theta = 72^\circ$

b) $r = 9\text{m}$ $\theta = 180^\circ$

c) $r = 7\text{cm}$ $\theta = 60^\circ$

3. Calculate the angle at the centre in degrees, given the area of a sector and the radius

a) $A = 56 \text{ cm}^2$, $r = 9\text{cm}$

b) $A = 18\pi \text{ cm}^2$, $r = 12\text{cm}$

c) $A = 25.6 \text{ cm}^2$, $r = 13\text{cm}$

4. Calculate angle at the centre in radians, given the area of a sector and the radius

a) $A = 17 \text{ cm}^2$, $r = 3.1\text{cm}$

b) $A = 125 \text{ cm}^2$, $r = 19\text{cm}$

c) $A = 45 \text{ m}^2$, $r = 6.9\text{m}$

