

Name

Date



AREA OF A SECTOR SHEET 2

Use the radius and angle measurement to find the area of these sectors. Give your answers to 2 decimal places.

| | | WORKING OUT | AREA |
|----|--|-------------|------|
| 1) | | | |
| 2) | | | |
| 3) | | | |
| 4) | | | |
| 5) | | | |
| 6) | | | |



AREA OF A SECTOR SHEET 2 ANSWERS

Use the radius and angle measurement to find the area of these sectors. Give your answers to 2 decimal places.

| | | WORKING OUT | AREA |
|----|--|---|---|
| 1) | | $\begin{aligned} \text{Area} &= (120/360) \cdot \pi \cdot 12^2 = 120/360 \cdot \pi \cdot 144 \\ &= 48 \pi \\ &= 150.80 \text{ to 2 decimal places} \end{aligned}$ | 56.7 cm^2 to 2 decimal places |
| 2) | | $\begin{aligned} \text{Area} &= (64/360) \cdot \pi \cdot (6 \frac{1}{2})^2 = 124/360 \cdot \pi \cdot (169/4) \\ &= (338/45) \pi \\ &= 23.60 \text{ to 2 decimal places} \end{aligned}$ | 53.0 in^2 to 2 decimal places |
| 3) | | $\begin{aligned} \text{Area} &= (135/360) \cdot \pi \cdot (38)^2 = 162/360 \cdot \pi \cdot 1444 \\ &= (1083/2) \pi \\ &= 1701.17 \text{ to 2 decimal places} \end{aligned}$ | 1701.17 mm^2 to 2 decimal places |
| 4) | | $\begin{aligned} \text{Area} &= (112/360) \cdot \pi \cdot (3.2)^2 \\ &= (112/360) \cdot \pi \cdot (10.24) \\ &= 3.1858 \pi \\ &= 10.01 \text{ to 2dp} \end{aligned}$ | 10.01 m^2 to 2 decimal places |
| 5) | | $\begin{aligned} \text{Area} &= (234/360) \cdot \pi \cdot (5 \frac{3}{4})^2 \\ &= (234/360) \cdot \pi \cdot (529/16) = (6877/320) \pi \\ &= 67.51 \text{ to 2dp} \end{aligned}$ | 67.51 in^2 to 2 decimal places |
| 6) | | $\begin{aligned} \text{The diameter of the circle is } 18 \text{ cm so the radius is } \\ 18 \div 2 = 9 \text{ cm.} \\ \text{Area} &= (325/360) \cdot \pi \cdot (9)^2 \\ &= (325/360) \cdot \pi \cdot 81 \\ &= (585/8) \pi \\ &= 229.73 \text{ to 2dp} \end{aligned}$ | 229.73 cm^2 to 2 decimal places |