## Area of a sector

Give all sector areas in terms of $\pi$ and to 2 dp

|  | Circle | Area of circle (in terms of $\pi$ ) | Angle in minor sector (in degrees) | Area of minor sector | Angle in major sector (in degrees) | Area of major sector | Area of minor sector + Area of major sector $=$ area of circle |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & A=\pi r^{2} \\ & r=10 \\ & A=\pi \times 10^{2} \\ & A=\pi \times 100 \\ & A=100 \pi \mathrm{~cm}^{2} \end{aligned}$ | 40 | $\begin{aligned} & A=\frac{40}{360} \times 100 \pi \\ & A=\frac{4000}{360} \times \pi \\ & A=\frac{100 \pi}{9} \\ & A=34.91 \mathrm{~cm}^{2} \end{aligned}$ | $\begin{aligned} & 360-40= \\ & 320 \end{aligned}$ | $\begin{aligned} & A=\frac{320}{360} \times 100 \pi \\ & A=\frac{32000}{360} \times \pi \\ & A=\frac{800 \pi}{9} \\ & A=279.25 \mathrm{~cm}^{2} \end{aligned}$ | $\begin{aligned} & \frac{100 \pi}{9}+\frac{800 \pi}{9}=\frac{900 \pi}{9} \\ & =100 \pi \end{aligned}$ |
| 1 | $D=16 \mathrm{~cm}$ | $\begin{aligned} & \mathrm{A}=\pi \mathrm{r}^{2} \\ & \mathrm{r}= \end{aligned}$ | 50 | $A=\frac{}{360} \times \ldots \pi$ | $360-$ |  |  |
| 2 | $\mathrm{R}=30 \mathrm{~mm}$ | $A=\pi r^{2}$ | 120 | $A=\frac{}{360} X$ |  |  |  |
| 3 | $R=2 m$ |  | 90 |  |  |  |  |
| 4 | $D=3$ miles |  |  |  | 200 |  |  |

