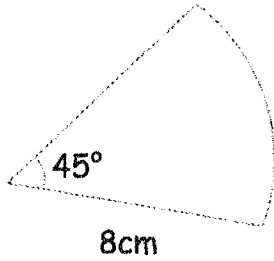


4th January



Corbettmaths

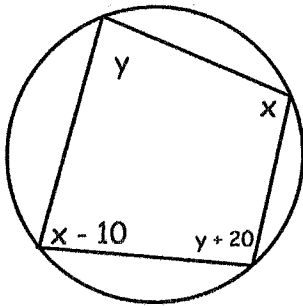
Find the perimeter of the sector.



$$\frac{45}{360} \times \pi d + 16$$

$$d = 16$$

$$2\pi + 16 = 22.3 \text{ cm (3sf)}$$



Find x and y.

$$\begin{aligned} x + x - 10 &= 180 \\ 2x &= 190 \\ x &= 95 \end{aligned}$$

$$\begin{aligned} y + y + 20 &= 180 \\ 2y &= 160 \\ y &= 80 \end{aligned}$$

Solve these simultaneous equations

① $3x - 4y = 18$ ($\times 2$)

② $2x - 5y = 19$ ($\times 3$)

$$\begin{aligned} 6x - 8y &= 36 & - \\ 6x - 15y &= 57 & - \\ \hline 7y &= -21 \\ y &= -3 \end{aligned}$$

Sub into ①

$$\begin{aligned} 3x + 12 &= 18 \\ x &= 2 \end{aligned}$$

w is inversely proportional to c squared.

When $w = 100$, $c = 2$.

Find w when $c = 4$.

$$\begin{aligned} w &= \frac{k}{c^2} \\ 100 &= \frac{k}{4} \\ k &= 400 \end{aligned}$$

$$\begin{aligned} w &= \frac{400}{c^2} \\ w &= \frac{400}{16} \\ w &= 25 \end{aligned}$$

Evaluate

$$27^{2/3} = 3^2 = 9$$