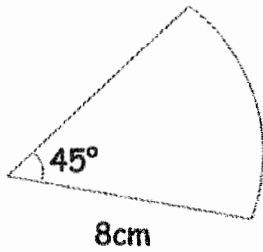


13th January

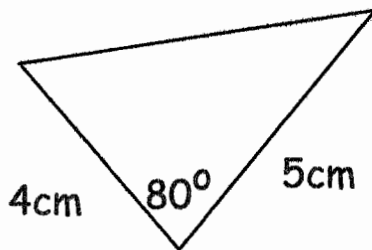


Corbettmaths



Find the area of the sector.

$$\begin{aligned} & \frac{45}{360} \times \pi \times 8^2 \\ &= \frac{1}{8} \times 64 \times \pi \\ &= 8\pi \text{ cm}^2 \end{aligned}$$



Work out the area of the triangle.

$$\begin{aligned} & \frac{1}{2} ab \sin C \\ &= \frac{1}{2} \times 4 \times 5 \times \sin 80 \\ &= 10 \sin 80 \\ &= 9.848 \text{ cm}^2 \end{aligned}$$

A car travels at 50mph to the nearest 10mph.

$$\begin{aligned} UB &= 55 \\ LB &= 45 \end{aligned}$$

It travels 220 miles to the nearest 10miles.

$$\begin{aligned} UB &= 225 \\ LB &= 215 \end{aligned}$$

What is the shortest possible time taken for this journey?

$$\begin{aligned} S &= \frac{d}{t} & \text{Min } t &= \frac{215}{55} \\ t &= \frac{d}{S} & & t = \underline{\underline{3.909...}} \end{aligned}$$

Helen is taking part in a quiz on TV. The probability she answers a question correctly is $\frac{4}{5}$

Helen is asked two questions

Calculate the probability she answers both questions correctly.

$$\frac{4}{5} \times \frac{4}{5} = \underline{\underline{\frac{16}{25}}}$$

An oil tank loses 32% of its contents every hour.

Peter says the tank will have lost 95% of its original contents by the end of the sixth hour.

Is Peter correct?

$$\begin{aligned} 100 \times 0.68^6 &= 9.89 \text{ (3sf)} \\ &= 90.11\% \\ &\text{No, he is wrong} \end{aligned}$$