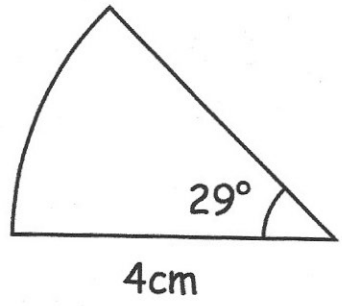
**13th January** **Higher 5-a-day**

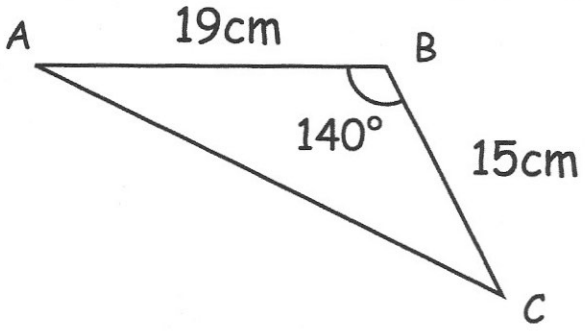
Corbettmaths




Find the area of the sector.

$\frac{29}{360} \times \pi \times 4^2$

$= 4.049 \text{ cm}^2$




Work out the area of the triangle.

$\frac{1}{2} \times 19 \times 15 \times \sin 140$

$91.597 \text{ cm}^2$

A car travels at 50mph to the nearest 10mph. UB = 55 LB = 45

It travels 220 miles to the nearest 10miles. UB = 225 LB = 215

What is the shortest possible time taken for this journey?

$S = \frac{d}{t}$ Min $t = \frac{215}{55}$

$t = \frac{d \leftarrow LB}{S \leftarrow UB}$ $t = 3.909\ldots$ hours

or

3 hours 54 mins 33 seconds

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

Calculate the probability she answers all three questions correctly.

$\frac{4}{5} \times \frac{4}{5} \times \frac{4}{5} = \frac{64}{125}$

An oil tank loses 32% of its contents every hour.
Theo says the tank will have lost 95% of its original contents by the end of the sixth hour.

Is Theo correct?

$100 \times 0.68^6 = 9.88\ldots$

No, 90.1%