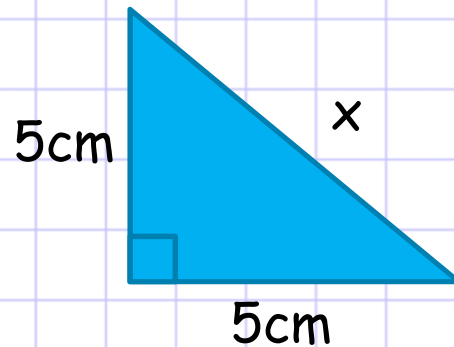


LO: Use Pythagoras' Theorem to find missing side lengths.

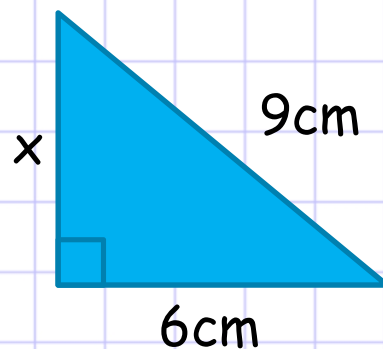
1)



Red

Find the length of each missing side, x , showing full working.

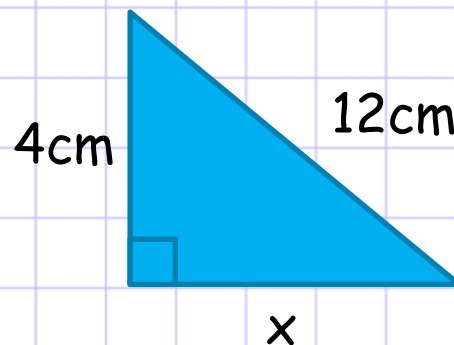
2)



Amber

Write your answer to three significant figures.

3)

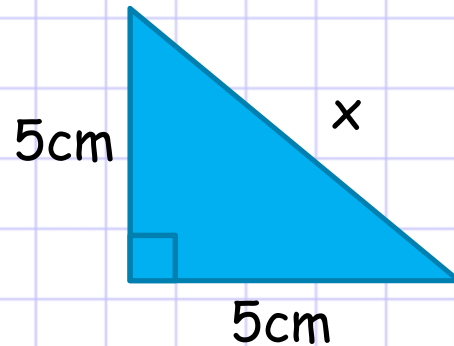


Green

Write each surd answer in its simplest form.

LO: Use Pythagoras' Theorem to find missing side lengths.

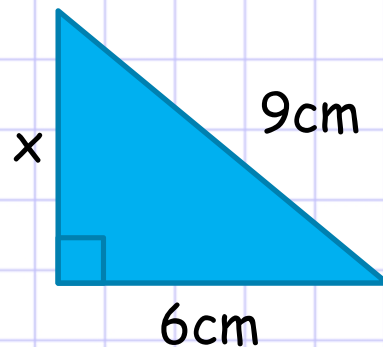
1)



$$\begin{aligned}5^2 + 5^2 &= x^2 \\50 &= x^2 \\\sqrt{50} &= x\end{aligned}$$

$$\begin{aligned}\text{Decimal: } x &= 7.071067\dots\text{cm} \\ \text{Rounded: } x &= 7.07\text{cm (3sf)} \\ \text{Surd: } x &= 5\sqrt{2}\text{cm}\end{aligned}$$

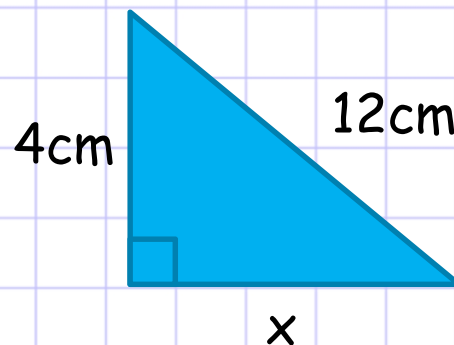
2)



$$\begin{aligned}6^2 + x^2 &= 9^2 \\36 + x^2 &= 81 \\x^2 &= 45 \\x &= \sqrt{45}\end{aligned}$$

$$\begin{aligned}\text{Decimal: } x &= 6.70820\dots\text{cm} \\ \text{Rounded: } x &= 6.71\text{cm (3sf)} \\ \text{Surd: } x &= 3\sqrt{5}\text{cm}\end{aligned}$$

3)



$$\begin{aligned}4^2 + x^2 &= 12^2 \\16 + x^2 &= 144 \\x^2 &= 128 \\x &= \sqrt{128}\end{aligned}$$

$$\begin{aligned}\text{Decimal: } x &= 11.31370\dots\text{cm} \\ \text{Rounded: } x &= 11.3\text{cm (3sf)} \\ \text{Surd: } x &= 8\sqrt{2}\text{cm}\end{aligned}$$