## © MathSphere www.mathsphere.co.uk <br> Puzzle time <br> A square triangle ??????????

This is a problem for our older puzzlers.
It may seem very peculiar to you but l've just drawn a triangle where all the angles are square.

No, I don't mean right angles or $90^{\circ}$ - that's impossible!

What I do mean is that each angle, measured in degrees, is a square number.

Can you tell me how many degrees each of the angles is?

Help!


Clue: the total of the three angles in a triangle is $180^{\circ}$.

Can you remember what square numbers are?


Try $1 \times 1,2 \times 2$, etc

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## Puzzle time

## A square triangle - answer

Remember the problem: a triangle with all the angles being square numbers!

The clue was that the total of the three angles in a triangle is $180^{\circ}$.

You get a square number by multiplying a number by itself, so:


The square numbers are:

$$
\begin{aligned}
1 \times 1 & =1 \\
2 \times 2 & =4 \\
3 \times 3 & =9 \\
4 \times 4 & =16 \\
5 \times 5 & =25 \\
6 \times 6 & =36 \\
7 \times 7 & =49 \\
8 \times 8 & =64 \\
9 \times 9 & =81 \\
10 \times 10 & =100
\end{aligned}
$$

There are three angles in a triangle (Yes there are!) so which three square numbers make 180 ?

The answer is:

$$
100+64+16
$$

