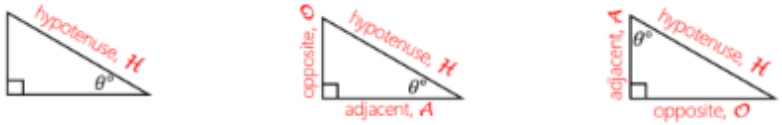
Key words and symbols: what I need to say and write accurately

The trigonometric functions have angles as their input. Their inverse functions are written using $^{-1}$.



The **hypotenuse** is the longest side in a right-angled triangle, opposite the right angle.
The other two sides are called the **adjacent** and opposite. They change depending on the angle you look at.

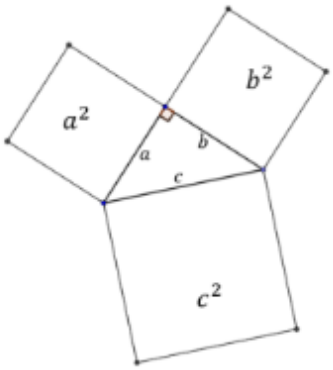


Fingertip facts: what I need to learn by heart

Pythagoras' Theorem

For any right-angled triangle,

$$a^2 + b^2 = c^2.$$



Trigonometry

Three equations:

$$\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}} \qquad \cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}} \qquad \tan(\theta) = \frac{\text{opposite}}{\text{adjacent}}$$

A mnemonic to help you remember the equations:

$$S^{O}H \quad C^{A}H \quad T^{O}A$$

The exact values of sine, cosine and tangent for key angles:

Angle, θ	30°	45°	60°
$\sin\theta$	$\frac{\sqrt{1}}{2} = \frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
$\cos\theta$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{1}}{2} = \frac{1}{2}$
$\tan\theta$	$\frac{1}{\sqrt{3}}$	1	$\frac{\sqrt{3}}{1} = \sqrt{3}$