Pythagoras theorem is used in building.

For example, because this roof truss is a right-angled triangle, Pythagoras Theorem can be used to work out how long the diagonal section will be.

The theorem is a squared + b squared = c squared.

If the two short sides, a and b are squared and added together, that will be the same as the hypotenuse (the longest side) squared.

Here the values for sides a and b are given, so the hypotenuse needs to be found.

Substitute the values into the equation.

5 squared is 25 and 6 squared is 36 so c squared equals 25 + 36 c squared equals 61.

So c is the square root of 61.

C is 7.8 metres (Remember to include the units of measurement) Pythagoras Theorem can also be used to find a missing short side in a right-angled triangle, like this one.

Substitute the values into the equation. A squared plus six squared equals nine squared

Rearrange it to make a squared the subject.

A squared equals 9 squared subtract 6 squared.

A squared equals 81 subtract 36 which equals 45.

Finally, to find “a” take the square root of 45 a equals 6.7 centimetres

Remember for Pythagoras Theorem: The formula is a squared plus b squared equals c squared, where c is the longest side of the triangle, the hypotenuse.

It can only be used when the triangle is right-angled.