Applications of Pythagoras Theorem

- To know if the triangle is a right-angled triangle or not.
- In a right-angled triangle, we can calculate the length of any side if the other two sides are given.
- To find the diagonal of a square.

Useful For

Pythagoras theorem is useful to find the sides of a right-angled triangle. If we know the two sides of a right triangle, then we can find the third side.

How to use Pythagoras Theorem?

To use Pythagoras theorem, remember the formula given below:

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

Where a, b and c are the sides of the right triangle.

For example, if the sides of a triangles are a, b and c, such that a = 3 cm, b = 4 cm and c is the hypotenuse. Find the value of c.



Hence, the length of hypotenuse is 5 cm.

How to find whether a triangle is a right-angled triangle?

If we are provided with the length of three sides of a triangle, then to find whether the triangle is a right-angled triangle or not, we need to use the Pythagorean theroem.

Let us understand this statement with the help of an example.

Suppose a triangle with sides 10cm, 24cm, and 26cm are given.

Clearly, 26 is the longest side.

It also satisfies the condition, 10 + 24 > 26

We know,