

# PYTHAGORAS THEOREM

Josephine Debattista  
St. Joseph School

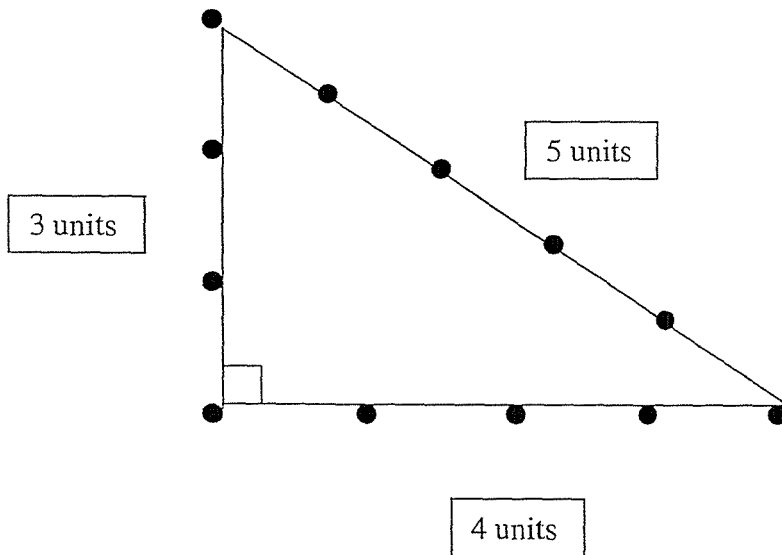
## Historical background

Pythagoras 580 BC was a Greek mathematician who became famous for formulating Pythagoras Theorem but its principles were known earlier.

The ancient Egyptians wanted to lay out square ( $90^\circ$ ) corners to their fields. To solve this problem about 2000 BC they discovered the 'magic' of the 3-4-5 triangle.

## Problem solving

A loop of rope with 12 equally spaced knots can be used to show the solution to the Egyptians' problem. Three sticks stretched the rope to form a triangle with 3, 4 and 5 units. The side of 5 units we call the hypotenuse and the angle opposite is equal to  $90^\circ$ .



## Conclusion

Around 500 BC the Greeks learnt this trick from the Egyptians and explored the 3-4-5 triangle and found that:  $5 \times 5 = 3 \times 3 + 4 \times 4$

Pythagoras generalised this rule to apply to all right angled triangles.