

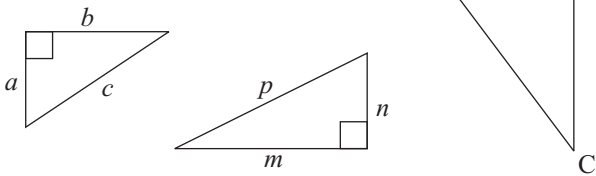
# Master Maths 9 Worksheet 71

## Pythagoras' Theorem 1

# 71

**Name:** \_\_\_\_\_

1. Highlight, in red, the hypotenuse of these triangles.



2. State whether the following are true or false.

(a)  $x^2 + y^2 = z^2$

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

(c)  $m^2 + n^2 - p^2 = 0$

- (d) The hypotenuse is always the longest side of a right-angled triangle.
- (e) It is impossible to have an equilateral right-angled triangle.
- (f) It is impossible to have an isosceles right-angled triangle.
- (g) The right angle in a right-angled triangle is always opposite the hypotenuse.
- (h) The sum of the lengths of the shortest sides of a right-angled triangle is equal to the length of the hypotenuse.

3. Use a ruler, pencil and compass to draw a triangle with side lengths of 3 cm, 4 cm and 5 cm.

Measure the angle between the 3 cm and 4 cm sides.

The angle is

4. A Pythagorean triad is a set of whole numbers that fits Pythagoras' theorem.

For example: 3, 4 and 5 is a Pythagorean triad because  $3^2 + 4^2 = 5^2$ .

Each of the following tables contains a set of Pythagorean triads.

Look for a pattern in each set of triads.

Use the pattern to help you complete the next two triads in each set.

(a)

3, 4, 5
5, 12, 13
7, 24, 25
9, 40, 41
11, 60, 61

(b)

6, 8, 10
8, 15, 17
10, 24, 26
12, 35, 37
14, 48, 50