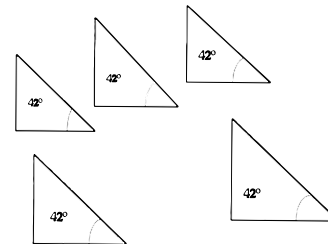


Trigonometry Investigation

This will work better if everyone in the class chooses a different angle, then you can compare what you find.

- 1) Choose any angle between 10° and 90° , except 44° , 45° , 46° and the angle used in this example.
- 2) Draw five different sized right angles, which contain your chosen angle. In the example, all the triangles include the chosen angle 42° .

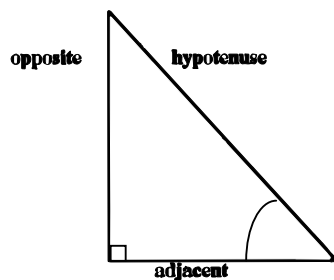


- 3) Label your right-angle and your chosen angle as shown
- 4) Label the sides of each triangle as shown

The longest side is called the **hypotenuse**

The side opposite your chosen angle is called the **opposite**.

The side next to both the right angle and your chosen angle is called the **adjacent**



- 5) Measure as accurately as you can all the sides of each triangle.
- 6) Complete the following table with your measurements. Then work out each fraction as a decimal number correct to 2 decimal places.

Triangle	Opposite O	Adjacent A	Hypotenuse H	$\frac{O}{H}$	$\frac{A}{H}$

- 7) Look at the results in your table. Do you notice anything?
- 8) Do you notice anything about the class result?
- 9) Can you find any link between your results, and the keys (sin) and (cos) on your calculator?