Last 20 minutes

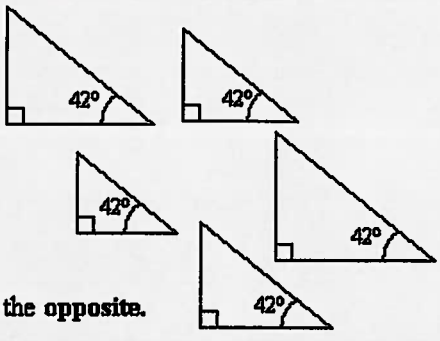
Trigonometry Investigation

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

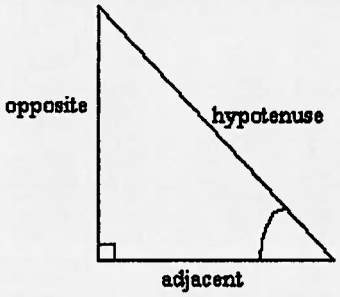


4) Label the sides of each triangle as shown below.

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?