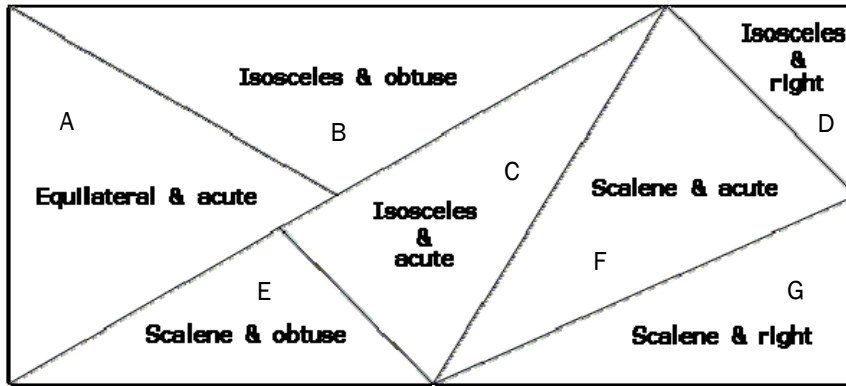




SHORT, CLASSIFY, CATEGORISE: MATHEMATICALLY

TRIANGLE SORT



INTRODUCTION

The basic elements of any triangle are its *sides* and *angles*. Triangles can be classified depending on relative sizes of their elements.

The table to the right gives some common categories of **sides** of triangles (1st column) and **angles** of triangles (2nd column).

The large diagram above describes the different types of triangles and gives each a name according to the sides and angles it has. For example, triangle A has 3 equal **sides** (equilateral) and 3 equal acute **angles**.

TRIANGLE CLASSIFICATIONS

Sides	Angles
• Scalene	• Acute
• Isosceles	• Right
• Equilateral	• Obtuse

Activity courtesy of: <http://www.cut-the-knot.org/triangle/Triangles.shtml>

ACTIVITY

Use the [diagram](#) to classify each triangle:

1. First according to the **sides** of the triangles (See table above). Use the categories to sort the triangles.
2. Then according to the **angles** of the triangles (See table above). Use the categories to sort the triangles

If you are unsure as to what the different categories (or definitions) mean, see the DEFINITIONS box.



MAKE IT COUNT

This week's sorting and classifying activities are a little more challenging. The **Triangle Sort** activity is a great one for late Intermediate Phase and early high school children as it uses some geometrical terminology that allows children to consolidate their knowledge.

The **Ice Cream Categories** show how data collected from a survey can be sorted and classified using Venn diagrams.

Sorting Numbers is an activity that could be tackled by grade 2 children and up.

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SA NUMERACY CHAIR PROJECT



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DEFINITIONS

SIDES:

A triangle is *scalene* if all of its three sides are different. If two of its sides are equal, a triangle is called *isosceles*. A triangle with all three equal sides is called *equilateral*.

ANGLES:

The sum of the angles in a triangle equals 180° . An *acute* angle is less than 90° . A *right* angle is exactly 90° . An *obtuse* angle is greater than 90° but less than 180° . A *reflex* angle is greater than 180° .



Image courtesy of: <http://www.mathsisfun.com/angles.html>

FOR DEEPER UNDERSTANDING

Encourage your child to talk about how they are sorting & classifying things. It helps you understand their thought processes and helps them get their thoughts in order.

ICE CREAM CATEGORIES

A teacher asked her class which flavours of ice cream they liked best. She gave them 3 choices: vanilla, chocolate and strawberry. These are the class results:

6	STRAWBERRY	2	VANILLA AND STRAWBERRY
6	VANILLA	1	VANILLA AND CHOCOLATE
12	CHOCOLATE	1	CHOCOLATE AND STRAWBERRY
7	ALL THREE		

- Try to show these results using groups (Venn diagrams) as we have done in previous weeks.
- Before you start, think about and discuss how many groups you might have.
- Draw the groups and put the results into the groups.

SORTING NUMBERS

Vuyo sorted some number cards into 2 groups; even numbers and 2-digit numbers.

Discuss why you think he has put these numbers into these groups like this.

Where would he put?
6 24 25 100

