

Good morning Year 4s, here is your maths for today:

Classifying triangles – Revision

Triangles are a type of polygon (a 2D shape with straight lines).

There are **four** different types of triangles:

- equilateral
- isosceles
- right-angled
- scalene



Make sure you can remember the names and how to spell them

Watch this video below from **KS2 Maths** to find out about the different types of triangles.

<https://www.bbc.co.uk/bitesize/articles/zckjtjsg>



All triangles have three sides, but their sides and angles all change depending on what type of triangle you are looking at.

Let's take a look at the different types:



Equilateral

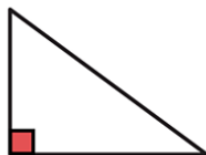
Equilateral triangles have three equal sides and three equal angles of **60°**.

This is easy to remember because 'equilateral' sounds like 'equal'!



Isosceles

Isosceles triangles have two equal sides and two equal angles.



Right-angled

You can always spot a right-angled triangle because it has a right angle (**90°**).

The right-angle is usually marked by a small square in the corner.



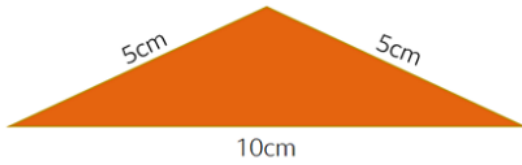
Scalene

Scalene triangles have no equal sides and no equal angles.

Its sides and angles are all different sizes.

Let's take a look at some examples. How would you identify these triangles?

Example 1:

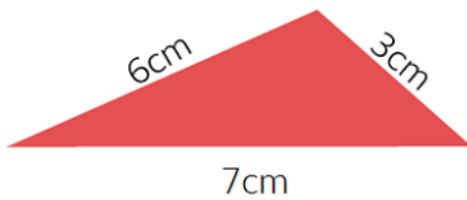


To decide what type of triangle this is, you have to look at the properties of the shape.

Look at the length of the sides. Two sides are **5 cm** and one is **10 cm**.

Since two sides are the same length, this triangle must be an **isosceles triangle**.

Example 2:



Look at the properties of the triangle - what are the measurements of the sides?

All sides are a different length, which makes this a **scalene triangle**.

Questions on next page

Shape and Space

e.g.



Equilateral



Isosceles



Scalene

Write on the lines below each shape, whether the triangles are equilateral, isosceles or scalene.

Q1



Q2



Q3



Q4



Q5



Q6



Q7



Q8



Now, on squared paper in your maths book, have a go at drawing one of each type of triangle.

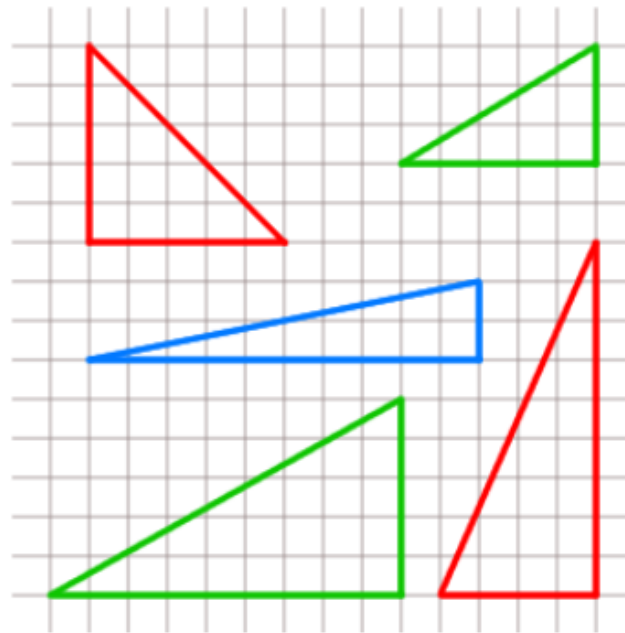
Challenge

This is a tricky one – good luck!

Uncanny Triangles

Age 7 to 11 ★★★

Thomas, Jane and Anna were drawing right angled triangles on squared paper. Their triangles had two sides which were an exact number of squares long and could not be longer than 15 squares. These are Jane's triangles:



They were calculating the areas of the triangles.

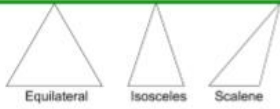
"I've got one triangle where the area and the sum of the lengths of the two shorter sides come to exactly the same number!" exclaimed Anna, "Look, it's that one!"

Thomas looked at his work. "How uncanny - but so have I! But look at it. It's quite a different shape from yours."

What were the measurements of the triangles they had drawn?

Answers

e.g.



Write on the lines below each shape, whether the triangles are equilateral, isosceles or scalene.

Q1



Isosceles

Q2



Scalene

Q3



Equilateral

Q4



Equilateral

Q5



Isosceles

Q6



Scalene

Q7



Scalene

Q8



Equilateral

Challenge

The first triangle is 3cm x 6cm so the sum is 9cm and the area is 9cm²

The second triangle is 4cm x 4cm so the sum is 8cm and the area is 8cm²