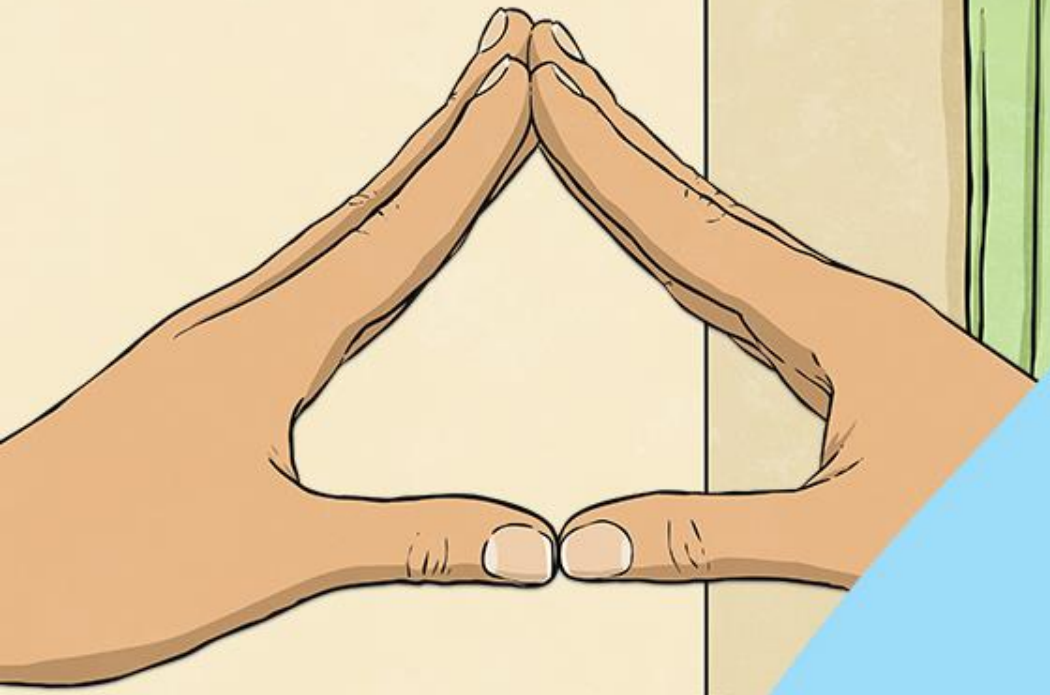
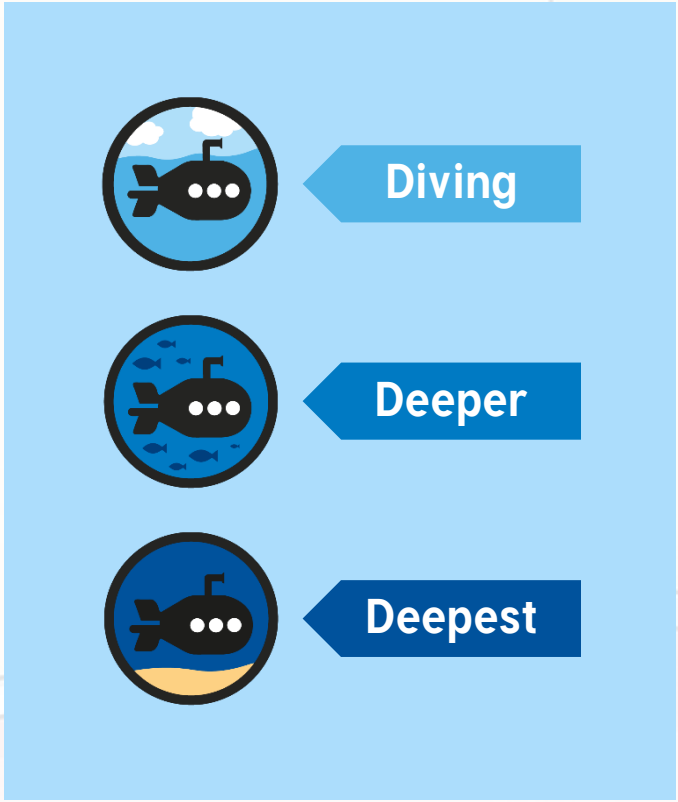
Diving into Mastery



Triangles

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

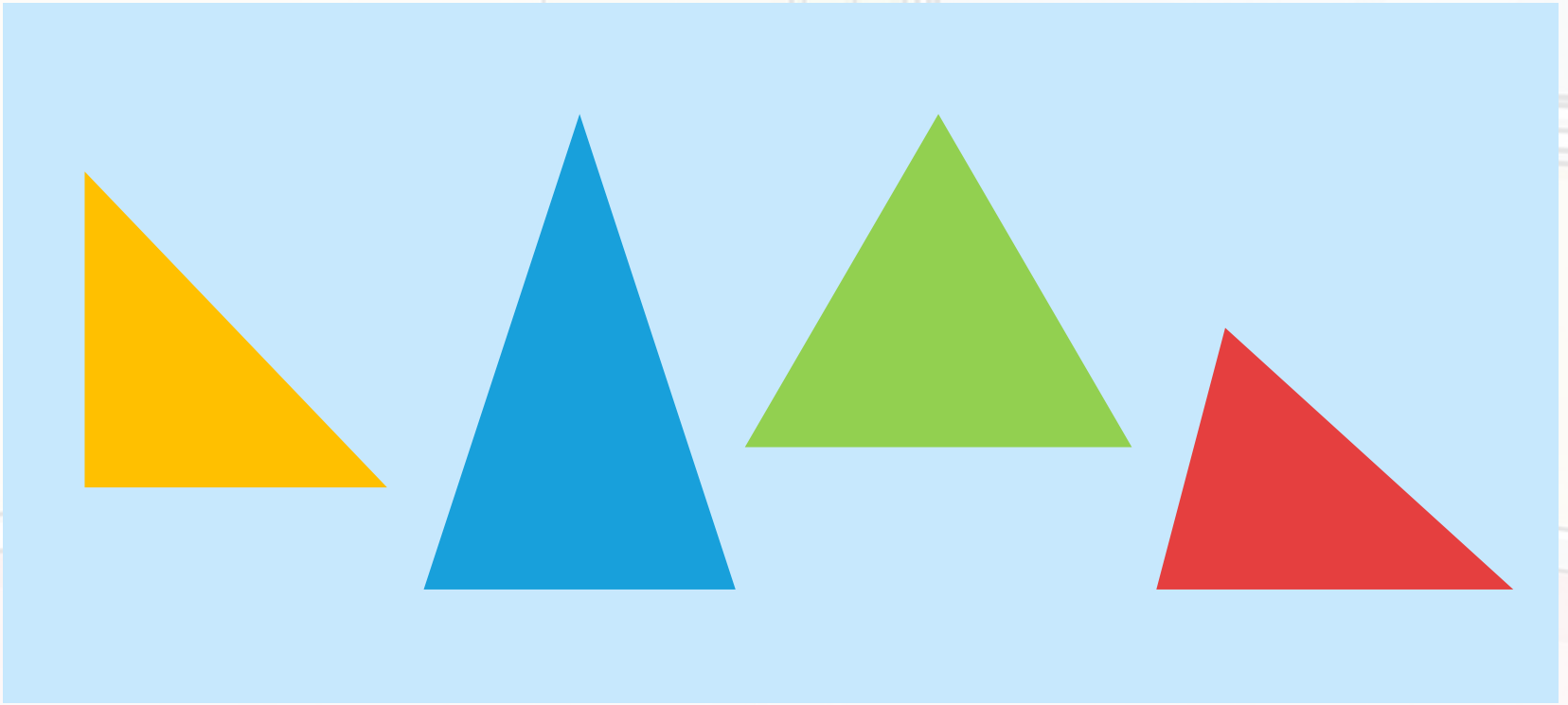
These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

National Curriculum Objective

- Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.

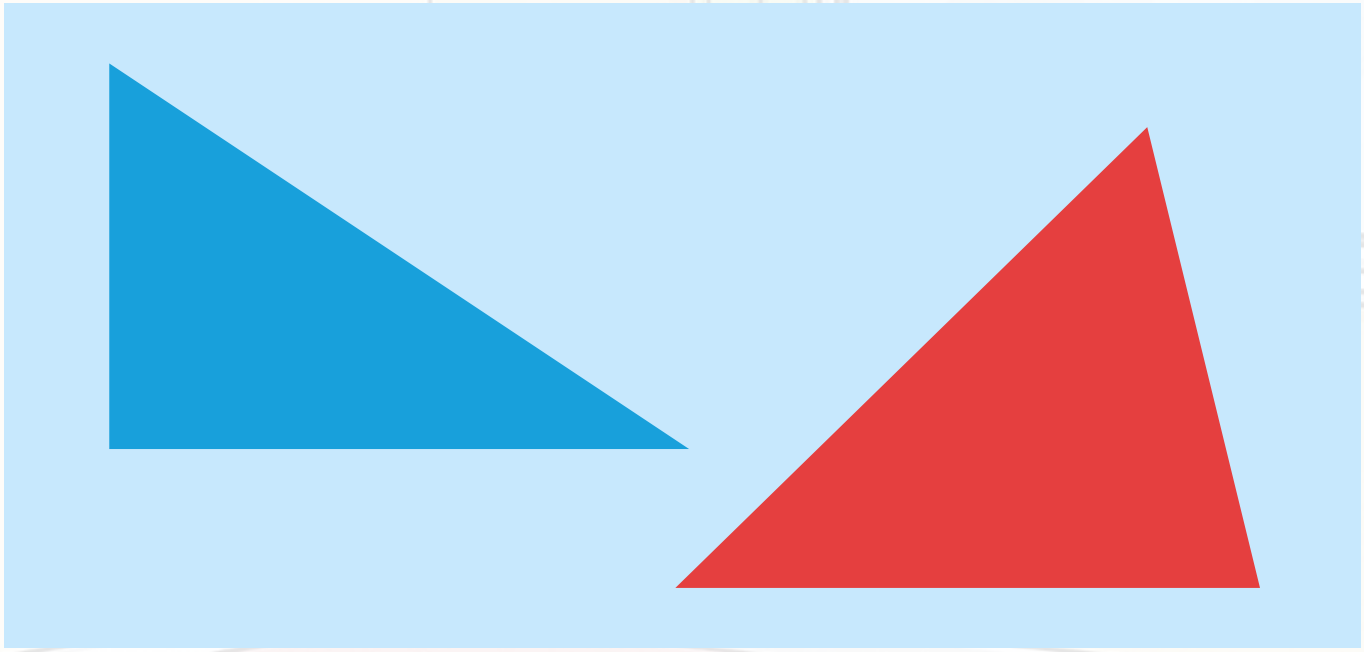
Triangles | Diving

Which triangle is equilateral?
Isosceles?
Scalene?
Right-angled?



Triangles | Diving

Name these triangles:

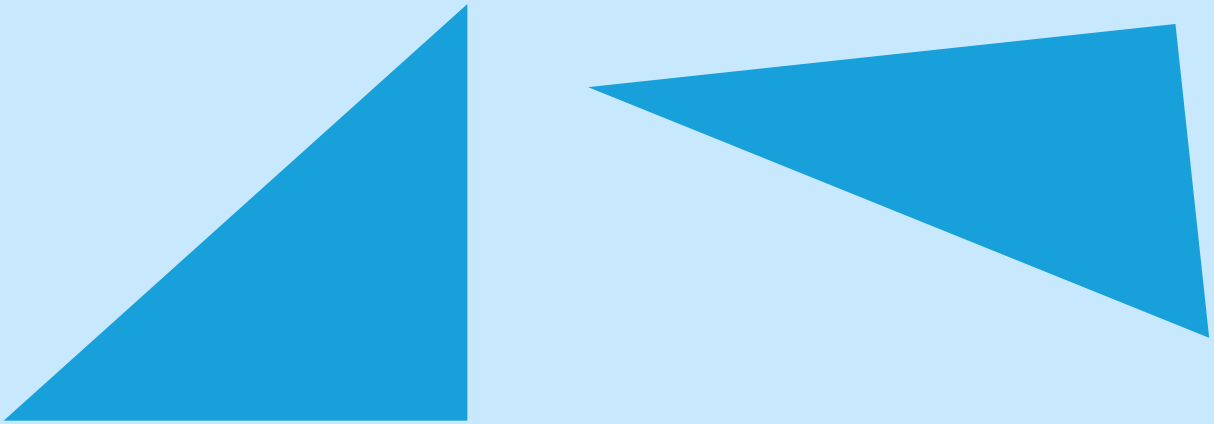


right-angled

scalene

Triangles | Deeper

What do these triangles have in common?
What is different about them?



They are both right-angled triangles.
One is also an isosceles triangle.

Triangles | Deeper

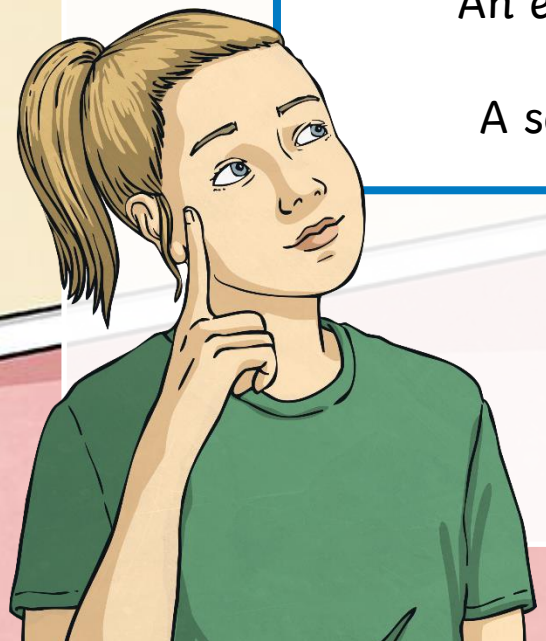
True or false?

A scalene triangle can have two equal sides. ✗

The right angle in a right-angled triangle can only be on the base of the triangle. ✗

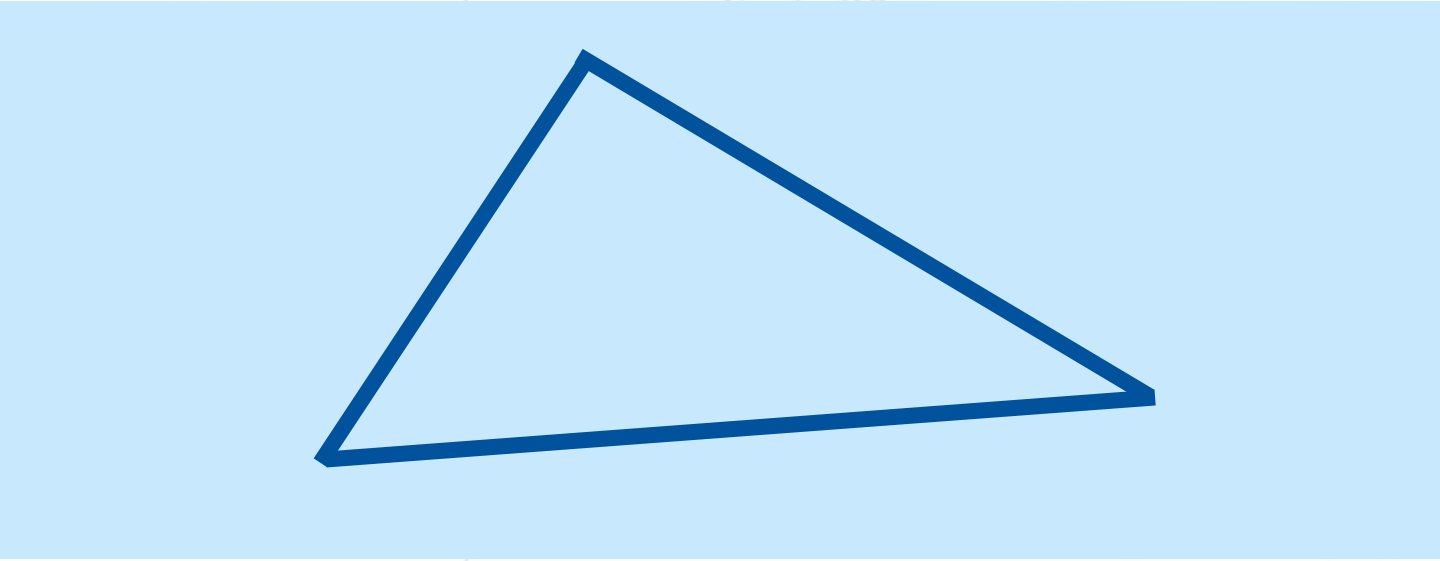
An equilateral triangle has all angles equal. ✓

A scalene triangle never has equal angles. ✓



Triangles | Deepest

How could I draw two more sides to make a scalene triangle?

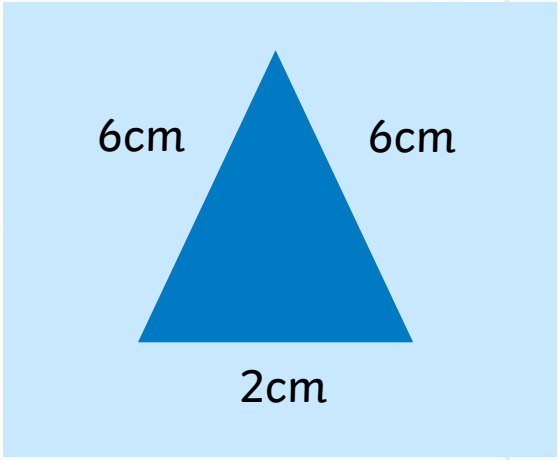


If this line was 6cm long and I used it as one of my equal length sides in an isosceles triangle, can you work out the length of one other side? How?

6cm! Isosceles triangles have two equal length sides.

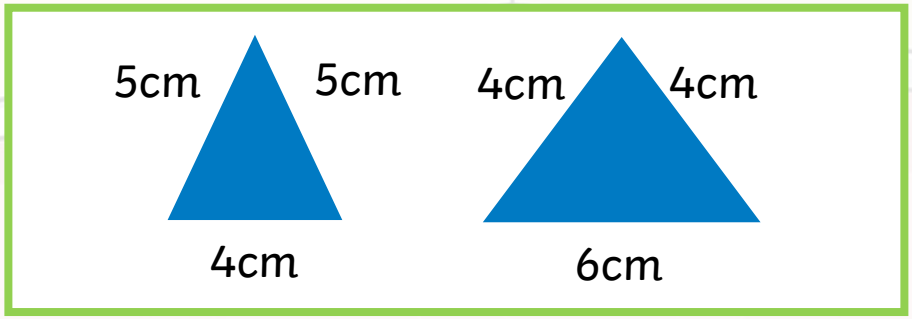
Triangles **Deepest**

If I draw an isosceles triangle with sides that are whole numbers and add up to 14cm, it has to have these measurements:



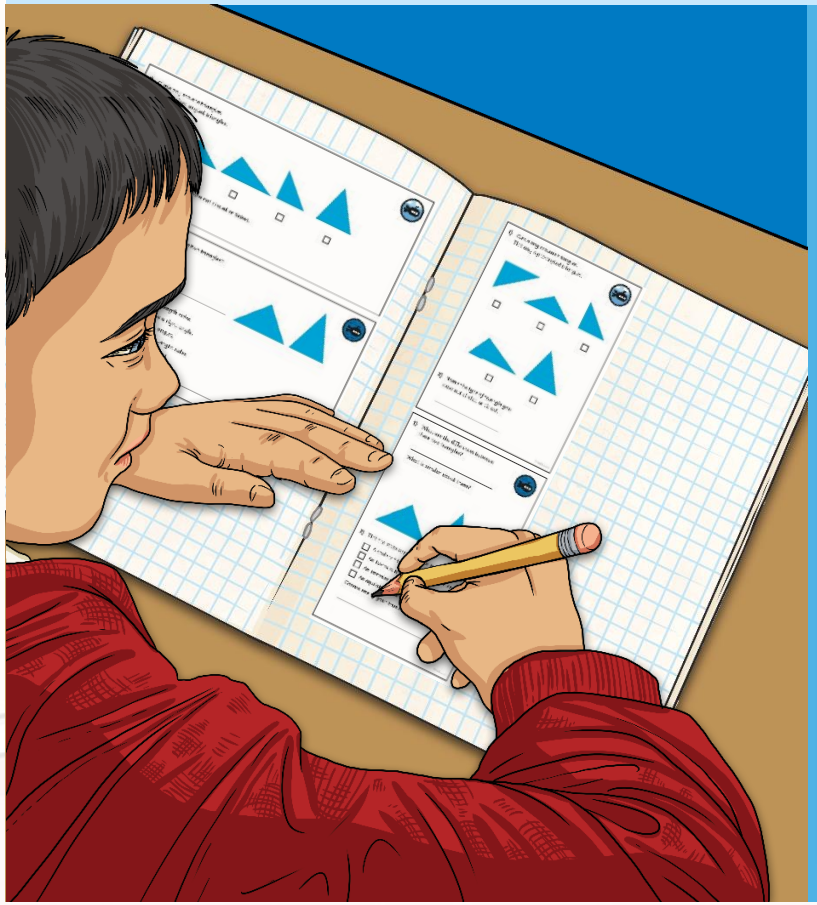
Is this correct?

What other isosceles triangles could have sides which equal 14cm?

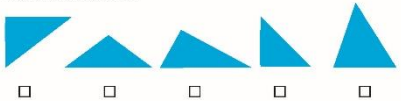


Triangles

Dive in by completing your own activity!



1) Circle any scalene triangles.
Tick any right-angled triangles.



2) Name the type of triangle you have not circled or ticked.

1) What are the differences between these two triangles?

What is similar about them?

2) Tick the statements that are true:

- ☐ A scalene triangle never has equal length sides.
- ☐ An isosceles triangle can never have a right angle.
- ☐ An isosceles triangle has three equal angles.
- ☐ An equilateral triangle has three equal length sides.

Choose one of your true statements and prove it!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