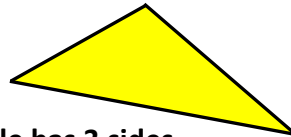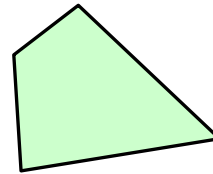This activity is about recognising 2D shapes and their properties.
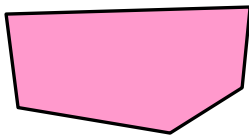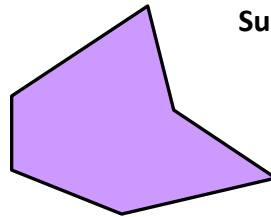
Information sheet

Polygons

A triangle has 3 sides
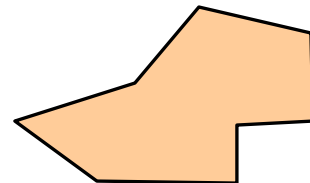Sum of the angles = 180°

A quadrilateral has 4 sides
Sum of the angles = 360°

A pentagon has 5 sides

A hexagon has 6 sides
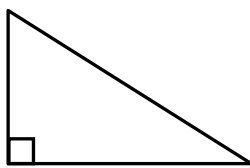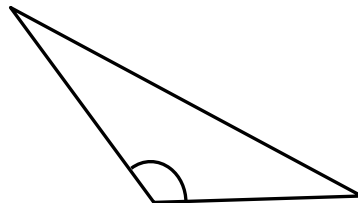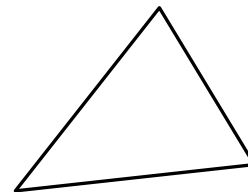
An octagon has 8 sides

Special triangles and their properties

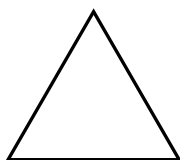**right-angled triangle**
one angle of 90°

obtuse-angled triangle
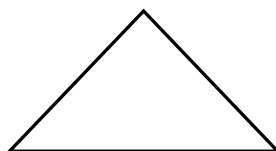one angle greater than 90°

acute-angled triangle
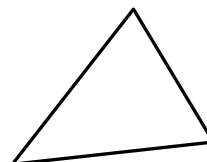three angles all less than 90°

Think about

Why is it not possible for a triangle to have more than one right angle?

equilateral triangle
3 equal sides
3 equal angles

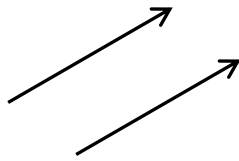**isosceles triangle**
2 equal sides
2 equal angles

scalene triangle
3 different sides
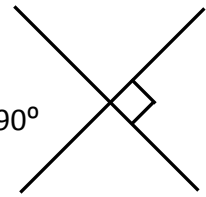3 different angles

Think about

What is the size of each angle in an equilateral triangle?

Parallel and perpendicular lines

parallel lines are
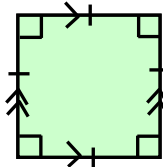always the same
distance apart

perpendicular lines
meet at an angle of 90°

Special quadrilaterals and their properties
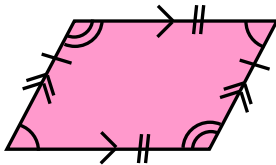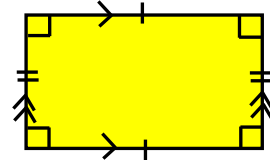
square
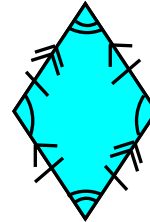4 equal sides, 4 right angles,
opposite sides parallel

rectangle
opposite sides equal
and parallel,
4 right angles

parallelogram
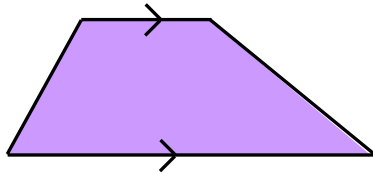opposite sides equal and parallel
opposite angles equal

rhombus
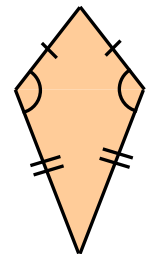4 equal sides
opposite sides parallel
opposite angles equal

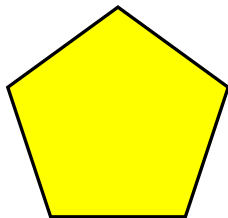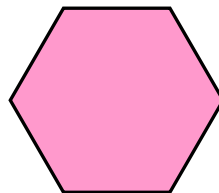**trapezium**
one pair of
parallel sides

kite
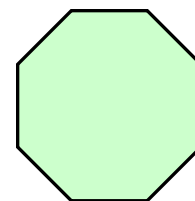2 pairs of equal sides
1 pair of equal angles

Regular polygons have equal sides and equal angles.

Regular pentagon

Regular hexagon

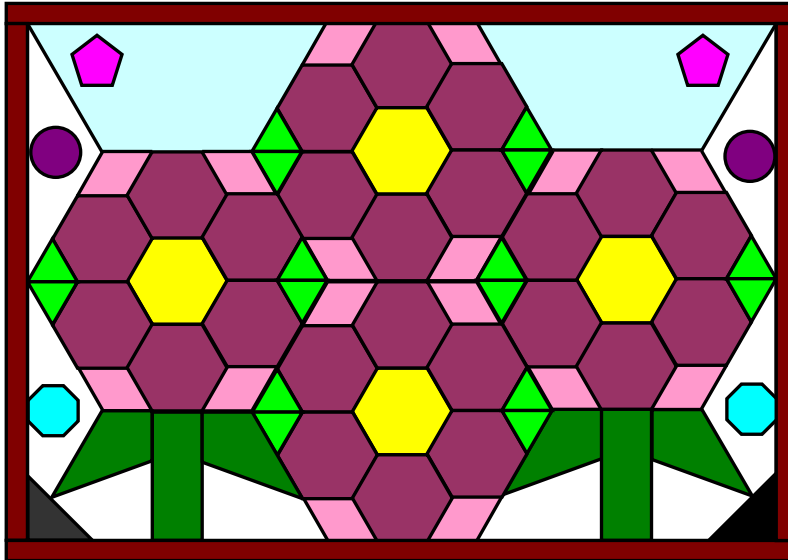**Regular octagon**

Think about

What is another name for a regular triangle?
What is another name for a regular quadrilateral?
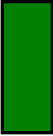
Try this   Shape names and properties
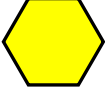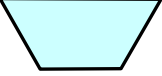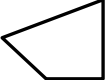
The diagram shows a geometrical design on a tray.
Use the diagram to answer the questions.

1 List the names of all the 4-sided shapes in the design.

2 What is the name of the shape at the centre of each flower?

3 Which shapes in the design have one or more pairs of parallel sides?

4 How many pentagons are there in the design?

5 Name the types of triangle used in the design.

6 Which geometrical shape in the design does not have straight sides?

7 What shape is the tray?

8 How many octagons are there in the design?

Try this   Symmetry

The table includes some of the shapes in the design. Fill the gaps.

Shape	Name of the shape	Number of lines of symmetry	Order of rotational symmetry

At the end of the activity

Name the different types of triangles.

Name each special type of quadrilateral. List their properties.

What does the term 'regular' mean?

What is another name for a regular quadrilateral?

What types of jobs involve using geometrical shapes? List as many as you can.