

Essential knowledge

Identify angles in basic polygons
 Identify angles in parallel lines
 Identify lines of symmetry
 Reflect a shape across a mirror line.

Key Vocabulary

Parallel: two straight lines that never meet with the same gradient.
Perpendicular: two straight lines that meet at 90°
Transversal: a line that crosses at least two other lines.
Sum: the result of adding two or more numbers.
Rotate: a rotation is a circular movement.
Symmetry: when two or more parts are identical after a transformation
Horizontal: from side to side
Vertical: from up to down

Prior learning links

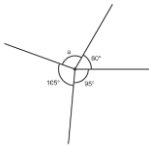
Year 7- Lines and angles

Basic angle facts

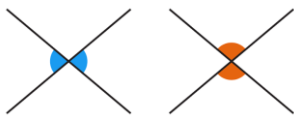
Angles on a straight line sum to 180 degrees



Angles around a point sum to 360 degrees

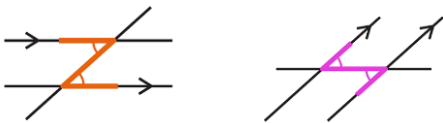


Vertically opposite angles are equal



Angles in parallel lines

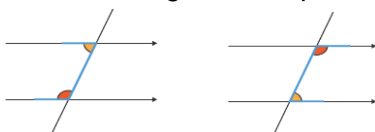
Alternate angles are equal



Corresponding angles are equal

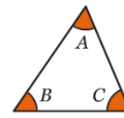


Co-interior angles add up to 180 degrees



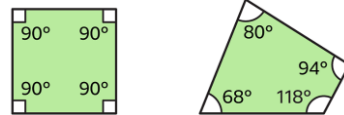
Angles in polygons

Angles in a triangle sum to 180 degrees



$$A + B + C = 180^\circ$$

Angles in quadrilaterals sum to 360 degrees

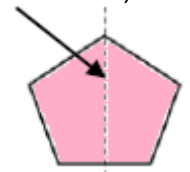


Line Symmetry

Mirror Line (Line of Reflection)

Shapes can have more than one line of symmetry.

This regular pentagon has **5** lines of symmetry.



Rhombus – 2 lines of symmetry



Circles have an **infinite amount** of lines of symmetry

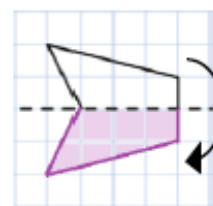


Parallelogram – no lines of symmetry

Reflection



Reflection in a vertical line

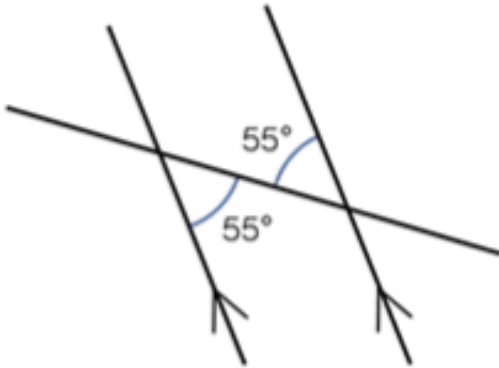


Reflection in a horizontal line

You can use a mirror to show where the reflected shape will be located before you then draw it.

Prior learning links

Work out all of the missing angles

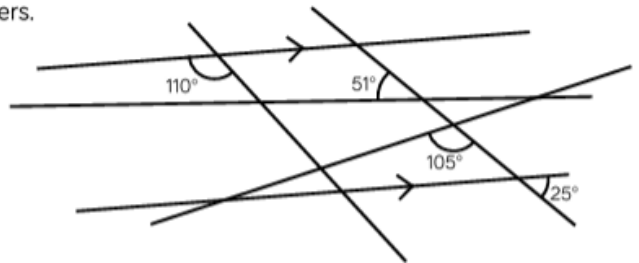


Key Vocabulary

Parallel:
Perpendicular:
Transversal:
Sum:
Rotate:
Symmetry:
Horizontal:
Vertical:

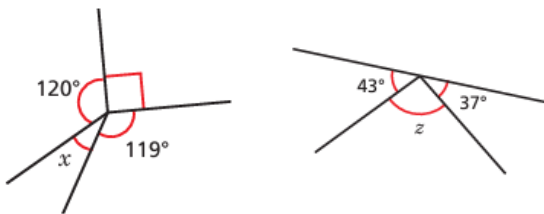
Angles in parallel lines

How many angles can you work out? Give a reason for each of your answers.



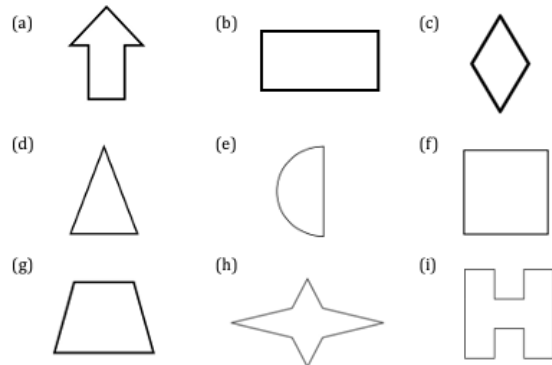
Angle facts

Find the missing angles



Lines of Symmetry

Draw on the lines of symmetry for each shape.



Angles in Polygons

Find the missing angle in each shape



Reflection

Reflect each shape across the mirror line denoted.

