

7 Reflection and rotation – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	Write it 3 times (English)		
transformation	_____	_____	_____
image	_____	_____	_____
reflection	_____	_____	_____
mirror line	_____	_____	_____
rotation	_____	_____	_____
centre	_____	_____	_____

Recall

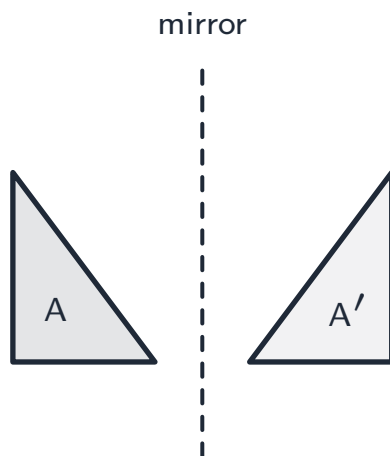
A **transformation** moves or changes a shape. The new shape is the **image**.

New ideas

Read these first, then do the Practice.

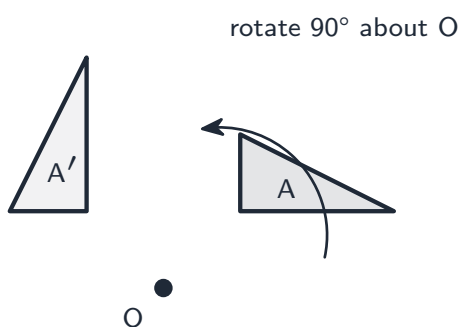
■ 1 Reflection

A **reflection** flips a shape across a **mirror line**. Each point and its image are the same distance from the line:



■ 2 Rotation

A **rotation** turns a shape about a fixed point (the **centre**), through an angle:



Watch out: a **reflection** flips a shape across a *mirror line* (each point ends the same distance from the line, on the other side). A **rotation** needs three things: the **centre**, the **angle**, and the **direction**.

Practice

Try these in order.

7.1 What is the *image* of a shape?

[1]

7.2 What does a reflection need? [1]

7.3 In a reflection, how far is the image from the mirror line, compared with the object? [1]

7.4 What three things do you need to describe a rotation? [2]

7.5 A shape is rotated 90° , then 90° again about the same point. Through what total angle has it turned? [1]

7.6 Challenge. A shape is rotated 90° clockwise three times about the same point. Through what single angle and direction could it have been turned in one go? [2]