

7 Reflection and rotation – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
transformation	变换	_____
image	像	_____
reflection	反射	_____
mirror line	镜线	_____
rotation	旋转	_____
centre	中心	_____

Recall

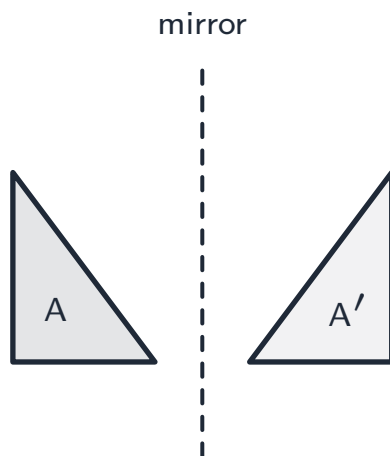
A **transformation** 变换 moves or changes a shape. The new shape is the **image** 像.

New ideas

Read these first, then do the Practice.

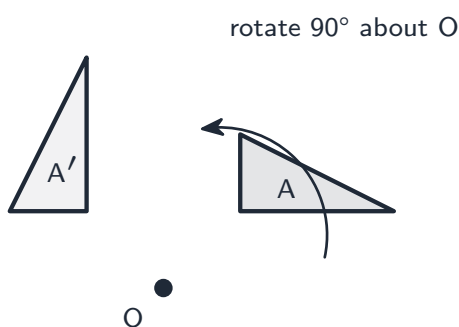
■ 1 Reflection

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



■ 2 Rotation

A **rotation** 旋转 turns a shape about a fixed point (the **centre** 中心), 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]