

4 Triangles and parallel lines – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English

Write it 3 times (English)

parallel

alternate

corresponding

Recall

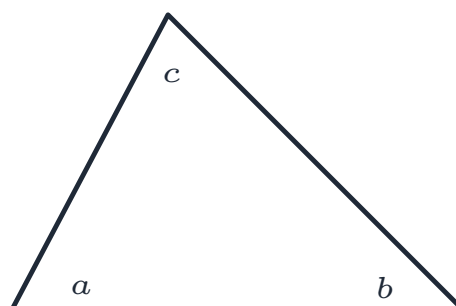
Triangles and parallel lines each have angle rules you can use.

New ideas

Read these first, then do the Practice.

■ 1 Angles in a triangle

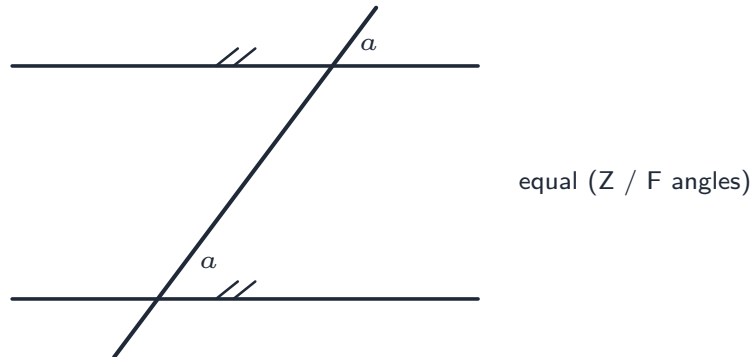
The three angles of a triangle add up to 180° :



$$a + b + c = 180^\circ$$

■ 2 Angles in parallel lines

When a line crosses two **parallel** lines, some angles are equal:



- **alternate** (Z) angles are equal;
- **corresponding** (F) angles are equal.

Watch out: the three angles of a **triangle** add to 180° . With parallel lines, **alternate** (Z) angles are equal and **corresponding** (F) angles are equal – look for the Z or F shape.

Practice

Try these in order.

4.6 The angles in a triangle add up to how many degrees? [1]

4.7 A triangle has angles 50° and 60° . Find the third angle. [2]

4.8 A triangle has two equal angles of 70° each. Find the third angle. [2]

4.9 What do we call the equal “Z” angles in parallel lines? [1]

4.10 Two corresponding (F) angles: one is 75° . What is the other? [1]

4.11 Challenge. An isosceles triangle has a top angle of 40° and two equal base angles. Find each base angle. [3]