

Triangles & Polygons

Name:

Date:

INQUIRY

The Louvre Pyramid in Paris has triangular faces. Every triangle's angles sum to 180 degrees. Always. Why?

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

Term	Definition
Interior angles	Angles inside a polygon. Triangle = 180.
Exterior angle	Angle between side and extended side.
Regular polygon	All sides and angles equal.

Part A — Triangles

1. Find missing angle: triangle with 54 and 73 degrees. [1 marks]

Show your working:

2. An isosceles triangle has an angle of 40 degrees. Find the other two (two possible answers). [3 marks]

Show your working:

Part B — Polygons

3. Interior angle sum of: (a) quadrilateral (b) pentagon (c) hexagon. Use $(n-2) \times 180$. [3 marks]

Show your working:

4. Each interior angle of a regular octagon. [2 marks]

Show your working:

Part C — Application

5. A Korean traditional kite is a quadrilateral with angles 60, 120, and 90 degrees. Find the fourth angle. [2 marks]

Show your working: