

Max the Monkey's Geometry Challenge

Learning objective: To identify, classify, and compare 2D and 3D shapes, including angles and lines of symmetry, suitable for Year 4 pupils working at greater depth.

Use these flashcards to test your knowledge of geometry. Read the question on the front, think carefully about the mathematical properties, and check your answer against the reverse side.

What is an acute angle?

An angle that measures less than 90 degrees.

Define an obtuse angle.

An angle that measures greater than 90 degrees but less than 180 degrees.

What is the key difference between parallel and perpendicular lines?

Parallel lines stay the same distance apart and never meet, while perpendicular lines cross at a 90-degree angle.

How many lines of symmetry does a regular pentagon have?

Five lines of symmetry.

What is a quadrilateral?

A four-sided polygon with four straight edges and four vertices.

Compare an equilateral triangle and an isosceles triangle.

An equilateral triangle has three equal sides and three equal angles, whereas an isosceles triangle has only two equal sides and two equal angles.

What is a horizontal line?

A line that runs from left to right, parallel to the horizon.

How many vertices does a triangular prism have?

Six vertices.

Explain why a circle is not classified as a polygon.

A polygon must have straight sides, and a circle is a curved shape.

What is a vertex?

A point where two or more straight lines or edges meet.

True or False: A square is a type of rectangle. Justify your answer.

True. A square is a special type of rectangle because it has four right angles and opposite sides that are equal.

What might happen if you joined two identical right-angled triangles along their longest side?

You would create a larger triangle or a quadrilateral, depending on how they are joined.