

Max's Magnificent Shape Hunt

Learning objective: To identify, describe, and classify 2D shapes, including identifying lines of symmetry and comparing angles.

Help Max the monkey solve his maths puzzles by looking closely at the properties of shapes. Use a ruler to check your lines of symmetry!

Max is tidying his jungle workshop. He has collected many different 2D shapes to decorate his treehouse. To keep them organised, Max needs to sort them by their properties. A shape is a polygon if it has straight sides. Max knows that a square is a special type of quadrilateral because it has four equal sides and four right angles. He is also looking for lines of symmetry, where one half of the shape is a perfect reflection of the other. Some angles are smaller than a right angle (acute), while others are wider (obtuse).

Word bank: polygon · symmetry · acute · obtuse · quadrilateral · parallel · vertex

1. Max has a regular pentagon. How many lines of symmetry does a regular pentagon have? (1 mark)

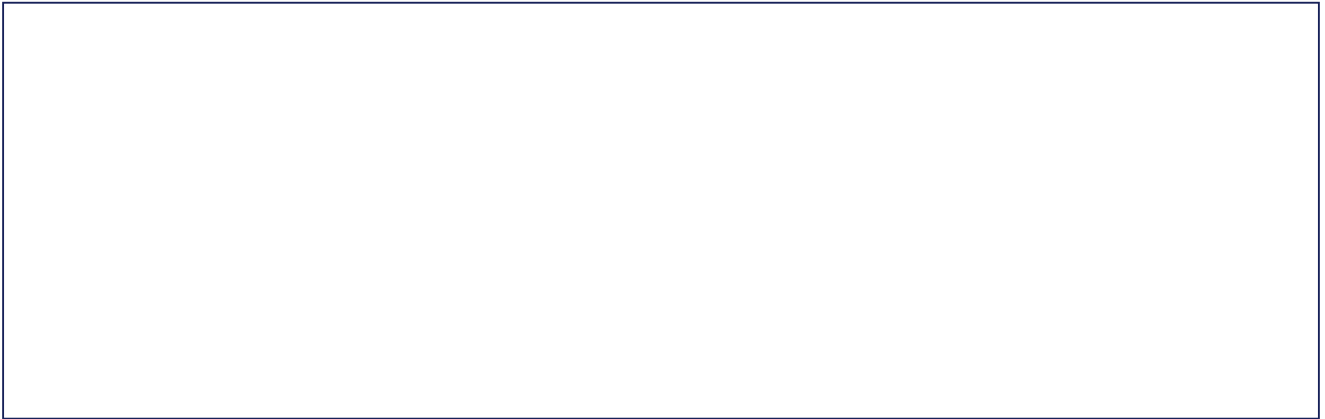
2. Look at a rhombus. Explain why a rhombus is classified as a quadrilateral but not as a square. (2 marks)

3. If Max draws a triangle with one angle larger than 90 degrees, what type of angle is it, and what is the name for this type of triangle? (2 marks)

4. A shape has two pairs of parallel sides and four right angles. Identify the shape. (1 mark)

5. Max buys a decorative wooden triangle for £4.50 and a circular frame for £3.75. How much does he spend in total? (2 marks)

Draw: Draw a composite shape made of one rectangle and one triangle. Label the vertices and draw one dashed line to show a line of symmetry if one exists.



Extension challenge: Max wants to create a pattern using only regular hexagons. Can you explain why hexagons fit together perfectly without leaving any gaps?