# Max’s Geometric Garden Design

*Learning objective: To identify, describe, and draw 2D shapes including symmetry, angles, and parallel/perpendicular lines.*

Max the monkey is designing a new garden for his friends. Read the descriptions below and use your ruler and pencil to draw the shapes in the spaces provided. Make sure to label the properties of your shapes.

Max is planning a garden with different zones for his friends. He wants a square vegetable patch, a rectangular pond, and a triangular flower bed. He needs to make sure the paths are parallel to the pond to keep the garden tidy. Every shape must be drawn with straight lines using a ruler.

*Word bank: polygon · parallel · perpendicular · acute · obtuse · line of symmetry · vertex · quadrilateral*

**1. Max wants to draw a square vegetable patch. How many right angles does a square have, and are the opposite sides parallel? (2 marks)**

**2. Draw a triangle that has one obtuse angle. Label the obtuse angle clearly. (2 marks)**

**3. Max draws a rectangular pond. If the length is 8cm and the width is 4cm, what is the perimeter of the pond? (2 marks)**

**4. Explain the difference between a parallel line and a perpendicular line using your own words. (2 marks)**

**5. If Max buys decorative stones for the edge of his square vegetable patch, and each side is 5m long, what is the total length of the edge in metres? (1 mark)**

**Draw: Draw a bird's-eye view plan of Max's garden. Include a square with a side length of 4cm, a rectangle that is 6cm by 3cm, and a pentagon. Add at least two lines of symmetry to your drawing.**

*Extension challenge: Design a 'secret' garden zone shaped like a regular hexagon. Calculate the perimeter if each side is 6cm long. Can you draw all the lines of symmetry for your hexagon?*