# Max’s Geometric Garden Party

*Learning objective: To identify, describe, and classify 2D shapes, including identifying lines of symmetry and understanding angles as properties of shapes.*

Read the story about Max the monkey’s garden party and answer the questions below to help him finish his preparations.

Max the monkey was busy planning a party in his garden. He wanted to decorate the space with colourful paper shapes. First, he cut out several triangles. He made sure some were equilateral, with three equal sides, and others were scalene with no equal sides. Max noticed that if he folded his triangular bunting in half, the two sides matched perfectly, showing a line of symmetry. Next, he moved on to the quadrilaterals. He made squares and rectangles, noting that their corners were all right angles. He carefully placed two long pieces of blue ribbon across the grass so they would never touch, creating parallel lines. Finally, he cut out a large, irregular hexagon to place in the centre of the table. He giggled as he measured the angles, finding some that were sharp and small, and others that were wide and open. Max felt very clever; he knew that by using maths, his garden party would look perfectly balanced.

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

**1. Max cut out a shape with three equal sides. What is the mathematical name for this type of triangle? (1 mark)**

**2. Explain what it means when Max says his bunting has a 'line of symmetry'. (2 marks)**

**3. Max created parallel lines with his ribbons. Describe how you can tell if two lines are parallel. (2 marks)**

**4. What is the name of the 6-sided polygon that Max placed on his table? (1 mark)**

**5. Max found some angles that were 'sharp and small' (less than 90 degrees) and some that were 'wide and open' (greater than 90 degrees). Can you name these two types of angles? (2 marks)**

**Draw: Draw a composite shape made of one square and one triangle joined together. Label the lines of symmetry on your drawing.**

*Extension challenge: Max wants to buy some balloons that cost 40p each. He has a £5 note. If he buys 8 balloons, how much change will he get? Write your answer in pounds and pence.*