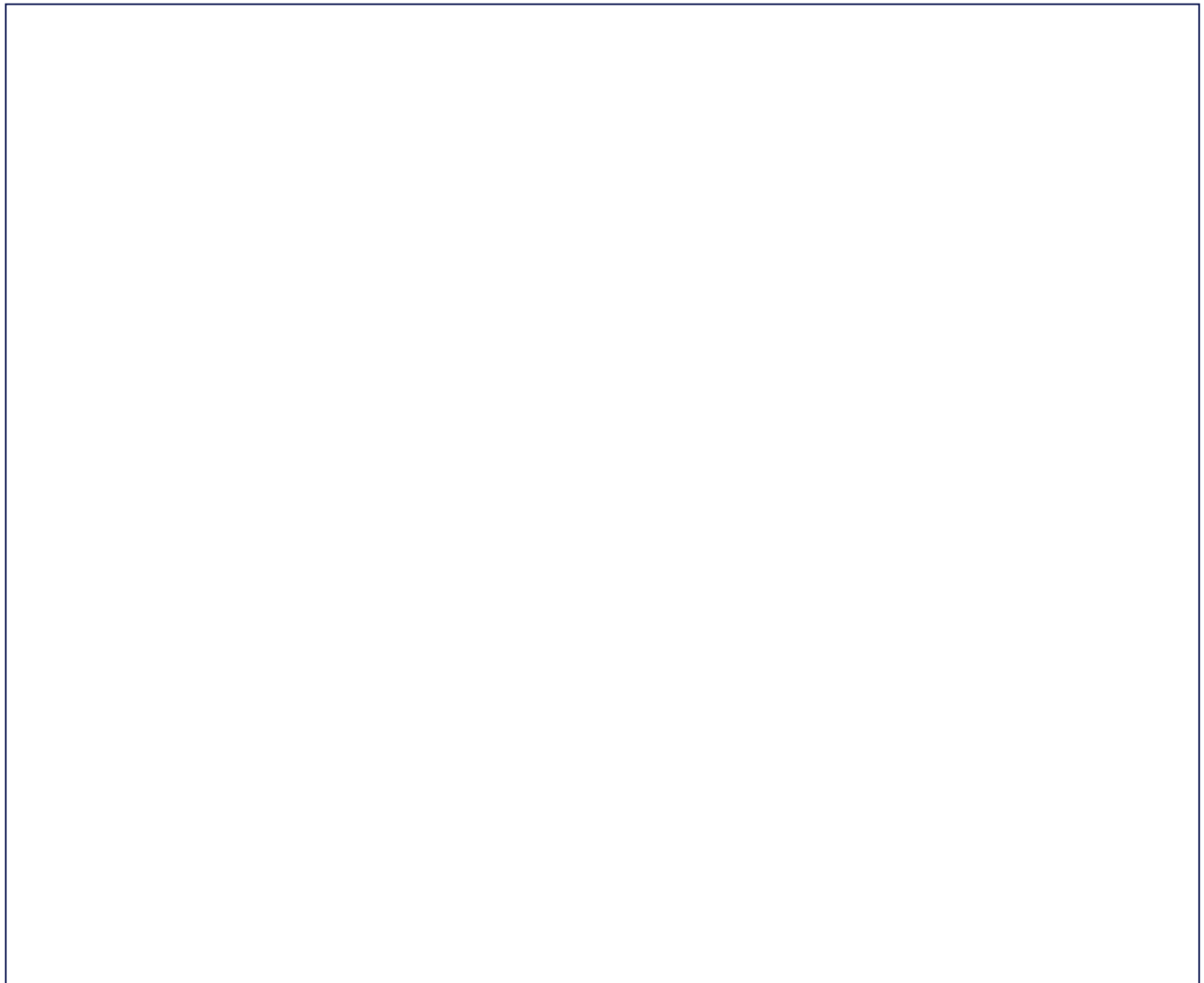


Max's Geometric Garden Design

Learning objective: To draw and classify 2D shapes based on their properties, including parallel lines, perpendicular lines, and internal angles.

Max the monkey is designing a symmetrical garden. Use your ruler and protractor to draw the garden features below, ensuring you accurately represent the properties of each shape.

Draw: Draw a top-down view of a garden on a piece of grid paper. Include: 1) A large rectangular pond (length 8cm, width 4cm). 2) A square flowerbed (side length 3cm) placed at a 45-degree angle to the pond. 3) A kite-shaped pathway connecting the two. Use a sharp pencil and ruler for all lines. Ensure your drawing is neat and all geometric shapes are clearly defined.



Label words: Parallel lines · Perpendicular lines · Acute angle · Obtuse angle · Reflex angle · Line of symmetry · Vertex · Polygon

Steps:

1. Draw a regular pentagon to represent a birdhouse. Label one internal obtuse angle and draw a line of symmetry through it.
2. Draw a right-angled triangle. Identify the perpendicular lines and label the acute angles.
3. Explain why a square is a special type of rectangle. Justify your answer using the properties of sides and

angles.

4. Compare and contrast a rhombus and a parallelogram. What do they have in common and how do they differ?
5. What might happen if you drew a quadrilateral with four equal sides but no right angles? Name the shape you have created.
6. If Max wanted to create a path in the shape of a regular hexagon, how would you calculate the size of one internal angle? Show your thinking.