Max’s Geometry Adventure: Mastering Angles

Learning objective: To identify, estimate, and calculate angles in degrees, and recognise angles around a point, on a straight line, and within shapes.

Help Max the monkey solve his geometry puzzles! Use a protractor to measure the angles you find and apply your knowledge of angle facts to calculate the missing values. Show your working out clearly in the boxes provided.

Word bank: acute · obtuse · reflex · right angle · protractor · degrees · straight line · sum · vertically opposite

1. Angle Identification: Look at the shapes Max has found. Choose three different angles, name their type (e.g., acute, obtuse), and estimate their size in degrees before measuring them. (3 marks)

2. Straight Line Challenge: Max has drawn a straight line with a ray coming out of it, creating two angles. If one angle measures 65°, calculate the missing angle. Show your sum. (2 marks)

3. Around a Point: Max is spinning around in a circle. If he has already turned 120°, 90°, and 75°, how many more degrees does he need to turn to complete a full turn of 360°? (3 marks)

4. Triangle Totals: Max knows that the angles in a triangle always add up to 180°. If a triangle has two angles measuring 45° and 60°, what is the size of the third angle? (2 marks)

5. Explain the Method: Describe the step-by-step process you use when lining up a protractor to measure an angle accurately. What should you look for? (2 marks)

Extension challenge: Challenge: Max has found a quadrilateral. If three of the angles are 110°, 70°, and 110°, can you calculate the fourth angle and name the shape?