

Grade 4 Math Assessment: Properties of Shape

Learning objective: To identify, describe, and represent the properties of 2D and 3D shapes, including angles and symmetry.

Read each question carefully. Show your working out where necessary. Max, our math-loving monkey, reminds you to check your measurements twice!

Max the monkey is helping his friends build a new woodland playground. He needs to use his knowledge of angles and shapes to make sure the climbing frames are safe and sturdy.

Word bank: acute · obtuse · reflex · parallel · perpendicular · polygon · vertex · symmetry

1. Max identifies a triangle with one angle measuring 110 degrees. What type of angle is this, and what do we call a triangle that has one angle greater than 90 degrees? (2 marks)

2. Look at a square and a rectangle. Identify two properties they share and one property that makes them different. (3 marks)

3. Finn the dolphin is drawing a map. He draws two lines that will never meet, no matter how far they are extended. What is the mathematical name for these lines? (1 mark)

4. A regular hexagon has a perimeter of 48cm. Calculate the length of one side. Show your working out. (2 marks)

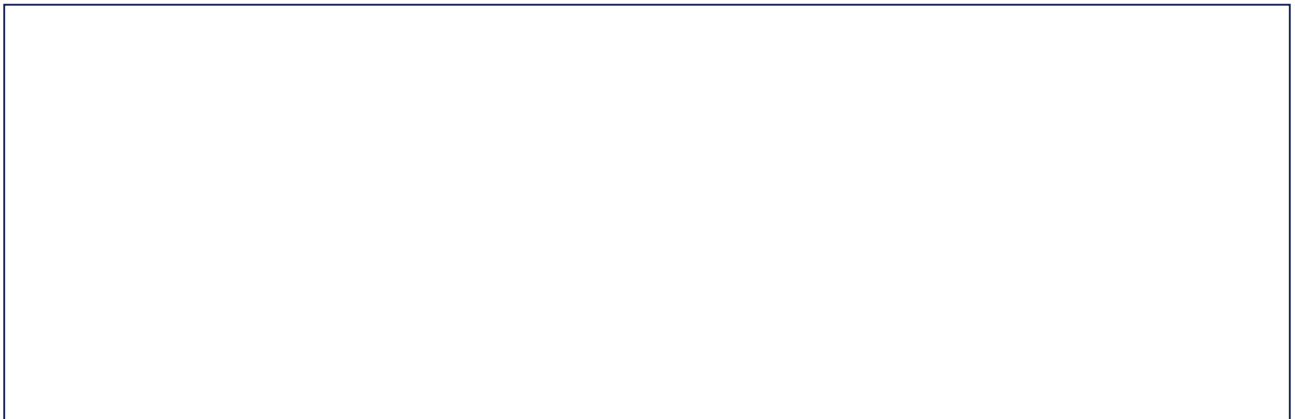
5. Nova the owl is looking at a 3D shape. It has 5 faces, 9 edges, and 6 vertices. Name this 3D shape and describe its base. (3 marks)

6. Zara the zebra is designing a pattern. She draws a shape with 4 sides. Two sides are parallel, but the other two are not. What is the name of this quadrilateral? (2 marks)

7. Max is building a wooden frame. He says, 'If I have a shape with 4 equal sides and 4 right angles, it must be a square.' Is he correct? Explain your reasoning using your knowledge of geometric properties. (4 marks)

8. Extended Writing Task: Write a guide for Pip the caterpillar explaining how to identify different types of angles (acute, right, obtuse, reflex) and how to measure them using a protractor. Use examples of where these angles might be found in the natural world. (8 marks)

Draw: Draw a composite shape made of a rectangle and a triangle. Label the right angles and draw any lines of symmetry.



Extension challenge: Total: /25