

Max the Monkey's Shape Adventure

Learning objective: To identify, classify, and compare 2D and 3D shapes, including identifying lines of symmetry and angles.

Read each question carefully. Use your ruler for drawing shapes and remember to show your working for any calculations. Good luck!

Max the Monkey has been organising his jungle puzzle collection. He needs your help to identify the properties of the shapes he has found so he can sort them into the correct baskets.

Word bank: acute · obtuse · right angle · line of symmetry · parallel · perpendicular · polygon · vertex · face · edge

1. Max has a square and a rectangle. Explain one similarity and one difference between these two quadrilaterals. (2 marks)

2. Look at a triangle. Define what makes an angle 'acute' and what makes an angle 'obtuse'. (2 marks)

3. Max finds a shape with 5 sides and 5 vertices. What is the mathematical name for this shape? Does it have any lines of symmetry? Explain your answer. (3 marks)

4. A 3D shape has 6 square faces, 8 vertices, and 12 edges. Identify the shape and calculate the total number of faces if Max stacks two of these shapes on top of each other. (4 marks)

5. Max draws a horizontal line. Draw a line that is perpendicular to it and explain why it is perpendicular. (3 marks)

6. Max is designing a patterned tile for the jungle floor. Write a short explanation (at least 5 sentences) describing how he can use his knowledge of lines of symmetry and 2D shapes to create a repeating pattern. Include terms from the word bank to show your understanding. (5 marks)

7. If a shape has 4 sides of equal length but no right angles, what is the name of this shape? (2 marks)

8. Identify one object in your classroom that is a cylinder. List two properties that make it a cylinder. (4 marks)

Draw: Using a ruler, draw an isosceles triangle and draw one dashed line to show its line of symmetry.



Extension challenge: Total: /25