

Max's Magnificent Geometry Challenge

Learning objective: To identify, describe, and classify 2D and 3D shapes, including nets and properties, in line with Year 6 curriculum standards.

Max the monkey is obsessed with maths puzzles! Help him sort through his collection of shapes by answering these 10 quick-fire questions. Write your answers clearly.

Answer Key: 1. A (Octagon); 2. True; 3. 8; 4. B (4); 5. False (a net must be able to fold into the shape); 6. 3D shape; 7. C (Perpendicular); 8. True; 9. 12; 10. A (60 degrees).

Word bank: Vertices · Edges · Faces · Congruent · Polygon · Net · Parallel · Perpendicular · Reflex · Protractor

1. 1. Max has a stop sign shape. How many sides does a regular octagon have? A) 8* B) 6 C) 10 D) 12 (1 mark)

2. 2. True or False: A rhombus is a type of parallelogram. (1 mark)

3. 3. How many vertices does a cube have? (1 mark)

4. 4. How many faces does a square-based pyramid have? A) 3 B) 5* C) 6 D) 4 (1 mark)

5. 5. True or False: Any arrangement of squares can be a net for a cube. (1 mark)

6. 6. Is a cylinder a 2D shape or a 3D shape? (1 mark)

7. 7. What do we call lines that meet at a 90-degree angle? A) Parallel B) Reflex C) Perpendicular* D) Horizontal (1 mark)

8. 8. True or False: An isosceles triangle has at least two equal sides. (1 mark)

9. 9. How many edges does a cuboid have? (1 mark)

10. 10. If an equilateral triangle has three equal angles, what is the size of each angle? A) 60 degrees* B) 90 degrees C) 45 degrees D) 180 degrees (1 mark)

Draw: Draw a net of a cube and label the faces, edges, and vertices for Max the monkey.



Extension challenge: Max has found a shape with 5 faces: 2 triangles and 3 rectangles. Can you name this 3D shape and draw its net?