

## Max's Magnificent Symmetry Challenge

*Learning objective: To identify, describe and draw lines of symmetry in 2D shapes and patterns.*

Help Max the monkey solve these symmetry puzzles! Read each question carefully and remember that a line of symmetry must divide a shape into two identical mirror images.

Answer Key: 1. B\*, 2. True, 3. 2, 4. C\*, 5. False, 6. 1, 7. C\*, 8. True, 9. 4, 10. B\*. Max's tip: Always check if the two sides match perfectly if you fold the shape along the line!

*Word bank: Symmetry · Line of symmetry · Mirror image · Vertical · Horizontal · Regular polygon*

1. 1. Max is looking at a square. How many lines of symmetry does a square have? A) 2, B) 4\*, C) 1, D) 0 (1 mark)

2. 2. True or False: A shape has symmetry if one half is an exact mirror image of the other. (1 mark)

3. 3. How many lines of symmetry does a rectangle have? (1 mark)

4. 4. Which of these letters has a vertical line of symmetry? A) F, B) G, C) A\*, D) J (1 mark)

5. 5. True or False: A scalene triangle has exactly one line of symmetry. (1 mark)

6. 6. How many lines of symmetry does a regular pentagon have? (1 mark)

7. 7. If you fold a shape and the edges do not line up perfectly, is it symmetrical? A) Yes, B) Sometimes, C) No\*, D) Only if it is a circle (1 mark)

8. 8. True or False: A circle has an infinite number of lines of symmetry. (1 mark)

9. 9. How many lines of symmetry does a rhombus have? (1 mark)

10. 10. Which shape has exactly 3 lines of symmetry? A) Square, B) Equilateral triangle\*, C) Parallelogram, D) Regular hexagon (1 mark)

**Draw:** Draw a butterfly with an open set of wings on a piece of squared paper. Use a ruler to draw the vertical line of symmetry straight down the middle of the butterfly's body.



*Extension challenge: Find three objects in your classroom or home that have at least one line of symmetry. Sketch them and use a coloured pencil to draw the line of symmetry on your sketch.*