Year 4 · Geometry: Shapes, Sides and Symmetry

Name: _____ Date: _____

Hi there! This sheet helps you name shapes, count their sides and corners, and find lines of symmetry. Take your time and enjoy spotting the patterns!

Warm-up

1. How many sides does a hexagon have?

2. How many corners (vertices) does a triangle have?

3. What is the name of a shape with 5 sides?

4. True or false: a square has 4 sides that are all the same length.

Practice

5. Name each polygon by its number of sides: (a) 4 sides, (b) 8 sides, (c) 10 sides.

6. A polygon has all its sides equal and all its angles equal. Is it a regular polygon or an irregular polygon?

7. Fill in the table for a regular polygon: how many edges and how many vertices does a regular heptagon (7 sides) have?

8. How many lines of symmetry does a square have? How many does a circle have?

9. Word problem: Aroha is making a garden path using tiles shaped like regular pentagons. Each pentagon tile has 5 equal sides of 12 cm. What is the total length around the edge (perimeter) of one tile?

10. Word problem: At Avondale Primary, Mr Tui draws two shapes on the board. Shape A has 6 equal sides and 6 equal angles. Shape B has 6 sides but they are all different lengths. Which shape is regular and which is irregular? Name Shape A.

Challenge

11. A regular octagon has 8 lines of symmetry. A regular hexagon has 6 lines of symmetry. Look at the pattern: how many lines of symmetry does a regular polygon have compared to its number of sides? Use this to find the lines of symmetry in a regular decagon (10 sides).

12. Leilani has a regular polygon tile with a perimeter of 48 cm. Each side is 6 cm long. How many sides does the tile have, and what is the name of this shape? How many lines of symmetry does it have?