Designing with Circular Symmetry

Radius | Diameter

Quadrants

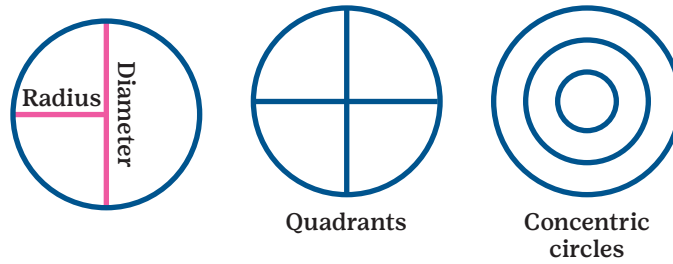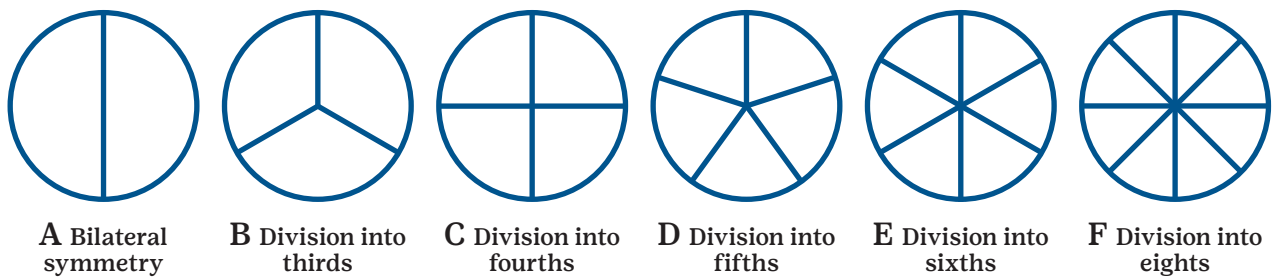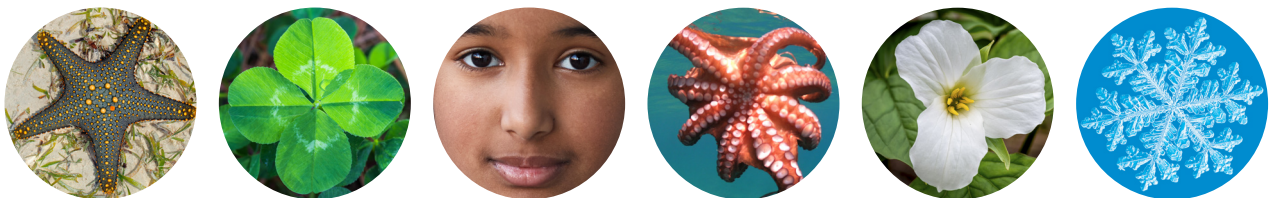Concentric circles

1. Imagine the circle where you'll create your design. Will it be on a plate, the ground, paper, or even in the air?

2. Create a line going across the circle and through the center. That's your first line of symmetry! It's also the circle's **diameter**.

3. Make another line going across the circle and through the center, creating four equal parts. That's your second line of symmetry! You now have four equal **quadrants**.

4. Look at each line coming from the center to the edge of the circle. That line is called a **radius**.

5. Add smaller circles inside your circle, all with the same center point. When circles fit inside each other and have the same center point, they're called **concentric**.

6. Use your lines of symmetry or concentric circles to design your art work! Add shapes, lines, and other patterns.

A Bilateral symmetry   **B** Division into thirds   **C** Division into fourths   **D** Division into fifths   **E** Division into sixths   **F** Division into eights

Match each natural object with its lines of symmetry.

1 _____   2 _____   3 _____   4 _____   5 _____   6 _____

Answers: 1—D, starfish; 2—C, rare 4-leaf clover; 3—A, face; 4—F, octopus; 5—B, trillium; 6—E, snowflake