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SUMMARY

NCERT Class 6 Maths Chapter 9: Symmetry

Overview

This summary of **NCERT Class 6 Maths Chapter 9: Symmetry** explores line symmetry and rotational symmetry in various figures and structures. Designed for students, teachers, and parents, it covers identifying symmetry lines, paper folding techniques, and rotational angles, making it ideal for exam preparation and artistic applications. Visit GovtJobsNet.com for more educational resources.

Key Concepts

- **Line of Symmetry**

    - A line of symmetry divides a figure into two mirror-image halves (e.g., vertical line in a square).

    - Example: Folding a triangle along a dotted line to check symmetry.

- **Figures with Multiple Lines of Symmetry**

    - Some shapes have multiple symmetry lines (e.g., square has 4: vertical, horizontal, two diagonals).

    - Example: Folding a square along different axes to confirm symmetry.

- **Paper Folding and Cutting**

    - Folding and punching holes creates symmetric patterns (e.g., square sheet with a hole).

    - Example: Predict hole shapes after vertical or horizontal folds.

- **Rotational Symmetry**

    - A figure has rotational symmetry if it looks the same after a partial turn (e.g., $90°$ for a square).

    - Angles of symmetry are factors of $360°$ (e.g., $90°, 180°$).

    - Example: A windmill with $90°, 180°, 270°$ symmetry.

- **Symmetry in Real Life**

    - Symmetry appears in structures like the Taj Mahal and natural objects like flowers.

    - Example: Identify symmetry lines in a kolam or gopuram.

- **Symmetry Properties**

– Every figure has 360° as an angle of symmetry.

– Some figures have lines but no rotational symmetry; others have rotational but no lines.

– Example: A circle has infinite lines but rotational symmetry at any angle.

Practice Questions

· Draw a figure with exactly one line of symmetry.

· Identify the number of symmetry lines in an equilateral triangle.

· Create a symmetric pattern using paper folding and a punch.

· Find the angles of rotational symmetry for a regular pentagon.

· Draw a figure with rotational symmetry at 120° and check its lines of symmetry.

Why This Chapter Matters

Understanding symmetry enhances spatial awareness, artistic design skills, and mathematical reasoning, applicable in architecture, art, and nature studies. It fosters creativity and observation. For more study materials and exam tips, explore GovtJobsNet.com.

<div align="center">Source: NCERT Class 6 Maths Chapter 9</div>