1. Find Missing Number in a Sequence
Problem: Given an array containing numbers from `1 to n` with one missing, find the missing number.

Example:

- Input: [1, 2, 4, 5, 6]
- Result: 3

Explanation: Use sum formula `n(n+1)/2` minus actual sum.

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2. Find Majority Element
Problem: Find element that appears more than n/2 times, if any.

Example:

- Input: [3, 3, 4, 2, 3, 3, 5]
- Result: 3

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3. Transpose of a Matrix
Problem: Convert rows into columns.

Example:

- Input:
  [[1, 2, 3],
  [4, 5, 6]]
- Result:
  [[1, 4],
  [2, 5],
  [3, 6]]

Explanation: Swap `matrix[i][j]` with `matrix[j][i]`.

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4. Rotate a Matrix by 90 Degrees
Problem: Rotate a square matrix clockwise by 90°.

Example:

- Input:
  [[1, 2, 3],
  [4, 5, 6],
  [7, 8, 9]]

- Result:
  [[7, 4, 1],
  [8, 5, 2],
  [9, 6, 3]]

Explanation: Transpose + reverse rows.

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10. Search in a 2D Sorted Matrix
Problem: Given a matrix sorted row-wise and column-wise, search for a target efficiently.

Example:

- Matrix:
  [[10, 20, 30],
  [15, 25, 35],
  [27, 29, 37]]

- Target: 29 → Found

Explanation: Start from top-right corner, move left or down.

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11. Spiral Order Traversal of a Matrix
Problem: Print all elements in spiral order.

Example:

- Input:
  [[1, 2, 3],
  [4, 5, 6],
  [7, 8, 9]]

- Result: [1, 2, 3, 6, 9, 8, 7, 4, 5]

Explanation: Use boundary pointers (`top, bottom, left, right`).
