

Advanced Formula & Strategy Sheet: Puzzles & Seating Arrangement

Comprehensive Guide for Competitive Examinations — <https://www.exambhai.com>

1. Linear Seating Arrangements

Core Concepts: * **Direction Matters:** Unless stated otherwise, assume *North* means facing upwards (Left = West, Right = East) and *South* means facing downwards (Left = East, Right = West). * **Adjacent vs. Between:** *A is adjacent to B* means B is immediate left or right. *Between* requires strict intermediate positioning.

Key Inference Rules: * A sits second to the right of B $\implies$ B [1] [A] (with one person/space between). * Only two people sit between A and B $\implies$ A – – B.

2. Circular Arrangements

Facing Center (Inward): * **Right:** Counter-clockwise (Anti-clockwise). * **Left:** Clockwise. * **Formula for opposite position in even count N :** Person at position i sits opposite to $(i + \frac{N}{2}) \pmod{N}$.

Facing Outside (Outward): * **Right:** Clockwise. * **Left:** Counter-clockwise.

3. Rectangular / Square Tables

* **Corners vs. Sides:** Typically, 4 people sit at the corners (facing inward or outward) and 4 sit in the middle of the sides. * **Diagonal Opposites:** Corner i faces corner $(i + 2) \pmod{4}$.

4. Floor / Box / Stack Puzzles

* **Top-Down Convention:** Floor 1 is usually at the bottom, and Floor N is at the top. * **Relative Positioning:** * A lives immediately above B $\implies A = B + 1$. * Three floors gap between A and B $\implies |A - B| = 4$.

5. Scheduling / Days / Months

* **Chronological Order:** Monday *o* Sunday or Jan *o* Dec. * **Matrix Method:** Create a grid with Entities vs. Attributes (Days, Colors, Professions) to eliminate impossible combinations systematically.

6. Golden Rules for Solving

1. **Pick Definite Clues First:** Start with fixed anchors (e.g., *A sits at extreme end*, *B lives on top floor*).
2. **Use Cases/Possibilities:** Keep track of parallel alternative cases (Case 1, Case 2) to avoid backtracking overhead.
3. **Negative Information:** Note down what is *not* true (e.g., *A does not like Red*) to drastically shrink the search space.