

Deductive Reasoning and Numeracy: Switch and Digit Methods

Switch challenge: deduction, not guessing

A typical switch-style task asks you to identify a digit sequence/combination that produces a required output. The exact display and feedback may vary.

Constraint method

1. Read exactly what a successful outcome means.
2. Start with positions/rules that are fixed by the information.
3. Change one assumption at a time when testing alternatives.
4. Use each feedback item to rule out a class of candidates.
5. Avoid changing every digit together; then you learn nothing from the result.

Logic language

- If A, then B: A is sufficient for B; B is not necessarily sufficient for A.
- A only if B: A requires B.
- Not(A and B) is different from not A and not B.
- "Exactly one" means one, not at least one.

Digit challenge: mental calculation

It typically rewards accurate, rapid arithmetic. Write nothing until instructions say rough work is allowed.

High-speed tactics

- Use complements: $98 + 37 = 100 + 37 - 2$.
- Break multiplication: $18 \times 7 = (20 \times 7) - 14$.
- Percent anchors: 10%, 5%, 1%, 25%, 50%.
- Divide by 4 = halve twice; divide by 25 = multiply by 4 then divide by 100.
- For choices, estimate first and eliminate impossible options.

Accuracy rules

- Keep sign (+/-) visible mentally.
- Do one operation at a time.
- If you lost track, skip rather than submit a random answer.
- Slow slightly on the first three questions; a stable rhythm is faster overall.

[[06_Gamified_Assessment/Game_Playbook|Game playbook]] · [[02_Aptitude/Aptitude_Formula_Sheet|Aptitude formula sheet]]