

Figure Series

~ Reasoning · SSC Exams ~



← circled = key tricks!



A **figure series** shows 3–4 boxes where a shape changes step-by-step by a **hidden visual rule**. Spot the rule & draw/pick the next figure.

① The Core Method – Compare 1 → 2 → 3 ↻

Look 1 — Rotation: did the whole shape turn? By how many degrees (45°/90°/135°)?

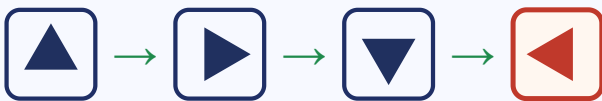
Clockwise (cw) or anticlockwise (acw)?

Look 2 — Position & count: did an element move (corner/side)? Did lines, dots or sides get added/removed?

Look 3 — Shading & size: did a part get shaded/coloured, or did the shape grow/shrink/flip?

Whatever change you find from fig 1 → 2, **confirm it repeats** fig 2 → 3 — then apply it once more for the answer.

Worked example – spot the rule



Step 1 — fig1 → fig2: triangle turns 90° clockwise.

Step 2 — fig2 → fig3: turns another 90° cw — rule confirmed (constant 90° cw rotation).

Answer → fig3 rotated 90° more cw = pointing **left**. ✓



This notebook covers **every SSC figure-series type**: rotation, movement, addition/removal, shading, size, reflection, combined rules, counting & common traps — each with a solved example.



Tip → always check **2 gaps** (fig1 → 2 AND fig2 → 3) before deciding the rule — one gap can trick you into the wrong pattern!

② Rotation Series ↻

Rule

The whole figure turns by a **fixed angle** (usually 45° , 90° or 135°) in a **fixed direction** (cw or acw) each step. Track the angle AND the direction separately.

Worked example – 90° clockwise



Step 1 – arrow up $\rightarrow$ right: turned 90° cw.

Step 2 – right $\rightarrow$ down: another 90° cw – confirmed.

Answer $\rightarrow$ down + 90° cw = pointing **left**. ✓

Try this – 45° anticlockwise



Each step turns 45° **anticlockwise** $\therefore$ next turn = 45° more acw $\rightarrow$ **pointing lower-left (225°)**.



A **symmetric** shape (plain square, circle) looks the same after $90^\circ/180^\circ$ rotation – use an **asymmetric** shape (arrow, flag, dot-in-corner) to actually see the turn!

③ Movement of an Element .^o

Rule

The outer box stays fixed but a **small element (dot/star/line)** moves around it — corner-to-corner or side-to-side, always in the **same direction** by the **same jump size**.

Worked example — dot moves corner-to-corner (cw)

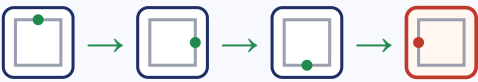


Step 1 — dot: top-left → top-right (jumped clockwise, 1 corner).

Step 2 — top-right → bottom-right (same cw jump) — confirmed.

Answer → bottom-right + 1 corner cw = **bottom-left**. ✓

Try this — element moves along the sides (mid-points)



Dot jumps top→right→bottom mid-points (cw, 1 side each time) ∴ next = **left mid-point**. ✓



Number the corners/sides 1,2,3,4 mentally — movement then becomes a simple +1 (cw) or -1 (acw) counting problem.

④ Addition & Removal of Lines/Dots +-

Rule

A fixed number of **lines / dots / sides** is **added** (or removed) at each step, usually in a fixed spot pattern (fan-out, corner-by-corner).

Worked example – one line added each step



Step 1 – 1 line → 2 lines: one new line added (going cw around the centre).

Step 2 – 2 lines → 3 lines: one more added, same cw spot – confirmed.

Answer → a 4th line completes the cross – **all 4 lines present**. ✓

Try this – dots removed one by one



One dot vanishes (top-left, then top-right) each step ∴ only **bottom-right dot** remains. ✓



Count the elements in each box first (1,2,3...) – a steady +1/-1 count is the easiest rule to confirm at a glance.

⑤ Shading & Colour Change

Rule

Either the **amount shaded grows/shrinks** by a fixed quarter each step, or the **position** of a single shaded part rotates around the shape.

Worked example – shading grows by 1 quarter

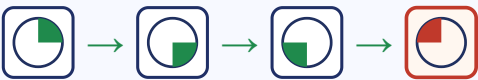


Step 1 – 1 of 4 quarters shaded → 2 of 4 shaded (+1 quarter, going cw).

Step 2 – 2 quarters → 3 quarters (+1 more) – confirmed.

Answer → 3 + 1 quarter = **fully shaded circle**. ✓

Try this – single shaded quarter rotates cw



Only **ONE** quarter is ever shaded – it just **rotates 90° cw** ∴ next = **top-left quarter shaded**.



Ask: is the **total shaded area** changing, or is a **fixed-size shaded part** just moving? These look similar but need different tracking!

⑥ Size – Grow / Shrink

Rule

The shape keeps its form but its **size steadily increases or decreases** by roughly equal steps — measure the side/radius in each box.

Worked example — square grows each step



Step 1 — side $12 \rightarrow 20$ (grows by 8 units).

Step 2 — side $20 \rightarrow 28$ (+8 again) — confirmed.

Answer $\rightarrow 28 + 8 = 36$ — the largest square, almost filling the box. 

Try this — circle shrinks each step



Radius $17 \rightarrow 12 \rightarrow 7$ (-5 each step) $\therefore$ next radius $= 7 - 5 = 2 - 3$ — a tiny dot-like circle. 



Watch out for a "grows then shrinks" (or vice-versa) trap — check ALL given boxes, not just the first two, before fixing a direction.

⑦ Reflection / Flip ▲

Rule

The figure is **mirrored** — flipped left-right (horizontal) or upside-down (vertical) — often **alternating** normal/mirrored every step. Only asymmetric shapes reveal this clearly.

Worked example — flag flips left-right each step

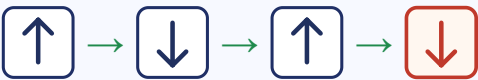


Step 1 — flag points right → points left (mirrored).

Step 2 — left → right again (flips back) — alternating pattern confirmed.

Answer → after "right", next flips again to **pointing left**. ✓

Try this — vertical (upside-down) flip



Arrow up → down → up → alternating vertical flip ∴ next = **arrow pointing down**. ✓



A 180° rotation and a double (horizontal+vertical) reflection can look **identical** for some shapes — check a flag/letter shape to be sure!

⑧ Combined Rules (Two Changes Together)

Rule

Many SSC questions change **two attributes at once** (e.g. rotation + shading, or size + movement). Track EACH attribute in its own separate mental column.

Worked example – rotation + shading together



Step 1 — TRACK A (triangle): rotates 90° cw each step. TRACK B (shading): +1 quarter shaded each step.

Step 2 — both patterns repeat identically fig2→fig3 — confirmed on both tracks.

Answer → triangle rotates 90° more (now pointing left) AND **all 4 quarters shaded (full circle)**. 



Method → state the rule out loud for EACH attribute separately: "shape does X, AND shading does Y" — then apply both to the answer.



Wrong options often get ONE track right but the OTHER wrong (e.g. correct rotation, wrong shading count) — verify both before marking.

⑨ Count-Based Series (+1 Element/Step) ...

Rule

One extra identical element (petal/dot/line) is added at each step, usually **evenly spaced** around the centre — simply count them.

Worked example — petals increase by 1



Step 1 — count petals: $1 \rightarrow 2$ (+1, evenly spaced apart).

Step 2 — $2 \rightarrow 3$ petals (+1 again, evenly spaced 120° apart) — confirmed.

Answer $\rightarrow 3 + 1 = 4$ petals, evenly spaced 90° apart. 

🔄 Reinforcing the Core Method $\rightarrow$ always re-compare fig1 $\rightarrow$ fig2 AND fig2 $\rightarrow$ fig3 before trusting a count — a single gap can hide a +1 that's really +2 later.



Elements are usually spaced $360^\circ \div \text{count}$ apart — so 3 petals sit 120° apart, 4 petals sit 90° apart, and so on.

Traps to Watch For ⚠

Trap 1 – Two changes at once

A shape can **rotate AND move** together. If you only track rotation, you'll pick the “correctly rotated but wrong position” option.



X trap — rotated only, forgot to move



✓ correct — rotated 90° cw AND moved 1 corner cw

Trap 2 – Rotation vs. Mirror look-alike

For an **asymmetric** shape, a 180° rotation and a horizontal mirror give **different** results — don't assume they're the same trick.



original



rotated 180°



mirrored

The rotated flag droops to the lower-left; the mirrored flag stays upright but faces left — visibly different!

How to Attack ANY Figure Series 📊

- 1→ Compare fig1→fig2: **what single/double change** happened (rotation angle+direction, position, count, shading, size)?
- 2→ Confirm the **same change** repeats fig2→fig3.
- 3→ Apply the identical change to fig3 to **predict** the answer.
- 4→ Check all 4 options — eliminate any with an **extra or missing change** (classic trap options).
- 5→ If two attributes change together, track each on its **own mental track**.

Quick Pattern Gallery — one-glance revision

Rotation: fixed angle + fixed direction (cw/acw)

Addition/Removal: count of lines/dots +1 or -1

Size: shape grows/shrinks by equal steps

Combined: two tracks change together — verify both

Movement: element jumps corner/side by fixed step

Shading: area shaded grows, or shaded part rotates

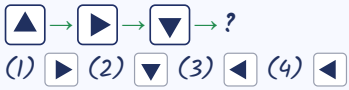
Reflection: mirrors left-right or upside-down

Count-based: +1 identical element, evenly spaced

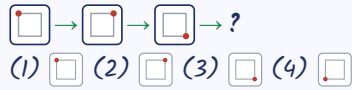
Exercise – Which Comes Next?

Pick the figure that continues each series, then check the Answer Key on the next page.

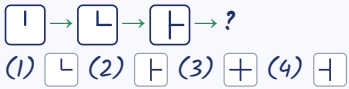
Q1 (rotation)



Q2 (movement)



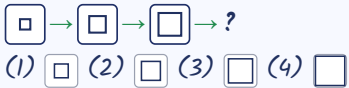
Q3 (addition)



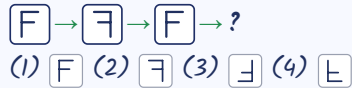
Q4 (shading)



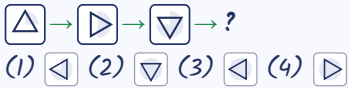
Q5 (size)



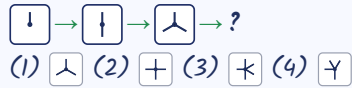
Q6 (reflection)



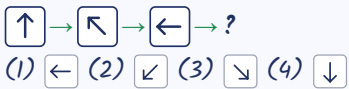
Q7 (combined)



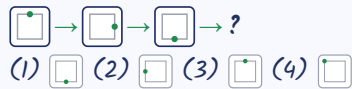
Q8 (count-based)



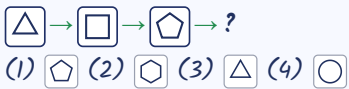
Q9 (rotation acw)



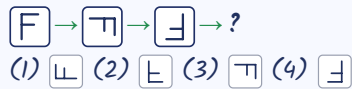
Q10 (side movement)



Q11 (sides +1)



Q12 (trap – rotation vs mirror)





Answer Key

- Q1 → (3)** — triangle rotates 90° cw each step; fig3 (180°) + 90° more = 270° . Option (4) is a mirror trap, not a rotation.
- Q2 → (4)** — dot jumps one corner clockwise each step: TL→TR→BR→BL.
- Q3 → (3)** — one new line added cw each step (1,2,3→4, completing the cross). Option (4) has only 3 lines wrongly placed.
- Q4 → (3)** — shaded quarters increase by 1 each step (1,2,3→4 = fully shaded).
- Q5 → (3)** — square side grows by 6 units each step (10,16,22→28).
- Q6 → (2)** — flag mirrors left-right every alternate step: normal→mirror→normal→mirror.
- Q7 → (3)** — two tracks together: triangle + 90° cw AND +1 shaded quarter each step → 270° rotation + fully shaded.
- Q8 → (2)** — petal count +1 each step, evenly spaced (1,2,3→4 petals, 90° apart). Option (4) has 4 petals but unevenly spaced.
- Q9 → (2)** — arrow rotates 45° anticlockwise each step ($0^\circ, -45^\circ, -90^\circ \rightarrow -135^\circ$). Option (3) wrongly rotates clockwise.
- Q10 → (2)** — dot jumps one side-midpoint clockwise each step: top→right→bottom→left.
- Q11 → (2)** — number of sides increases by 1 each step: triangle(3)→square(4)→pentagon(5)→hexagon(6).
- Q12 → (1)** — trap question: the flag genuinely rotates 90° cw each step (not mirrors) → fig3(180°)+ 90° = 270° . Option (2) is a mirror look-alike, not a true rotation.

Score yourself

10–12 correct → **excellent**, figure series is your strength! 6–9 → **good**, revisit pages 2–9. Below 6 → **redo** the “How to Attack” steps on page 10 slowly, tracing each figure by hand.

☆ Spot the change, crack the figure! ☆

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