

Cheat Sheet: Reflection

Reflection (Self-critique) = layer two: AI critically examines its own chain of thought.

Why this matters

A final answer says little. The real value lies in *how* AI reasons — and whether it dares to check itself.

- **Chain-of-Thought (CoT)** makes the steps visible.
- **Reflection / Self-critique** makes AI review those steps.
👉 Result: more transparent and usually more reliable output — though reflection can still miss errors.

Dimension: Reasoning Style

- **Chain-of-Thought (CoT)** → “Think step by step.”
- **Reflection prompting** → “Review your own reasoning critically.”
- **Self-critique** → “Is this complete and consistent?”

Examples

Maths

✗ Without CoT/Reflection: “ $24 \times 17 = 408$.” (no visibility of mistakes)

✓ With CoT + Reflection: “Work out step by step → 408. Check: $20 \times 17 + 4 \times 17 = 408$.”

Text analysis

✗ “Summarise the text.” → superficial.

✓ “Summarise step by step. Reflect: which assumptions or nuances are missing?”
→ points out overlooked details.



Tips

- Use **two prompts**: first think step by step, then reflect.
- Provide **criteria**: “Check completeness, assumptions, consistency.”
- Keep reflection **concise** (max. 3–5 points) → avoid over-analysis.
- Remember: even a neat reasoning **can still be wrong** (*faithfulness problem*).

✓ Checklist – Do’s & Don’ts

Do’s	Don’ts
Combine CoT with Reflection	Accept only the final answer
Ask explicitly for self-critique	Vague check: “Is this correct?”
Review assumptions & completeness	Endless meta-reflection

⊘ Not to be confused with...

- **Only CoT** → showing steps ≠ self-critique.
- **Fact-checking** → reflection checks logic, not factual accuracy.
- **Stylistic reformulation** → nicer wording ≠ content check.

Try this

1. Give AI one of your own incorrect answers.
2. Ask: “Show the steps” (CoT).
3. Ask: “Reflect: where does this go wrong?” (Self-critique).

👉 See if AI identifies the error, its cause, and a better alternative.

Learn & Apply

Write your own cheat sheet. Every reflection is a free second opinion — and often more educational than the correct answer itself.

Explore more

🔗 More cheat sheets on prompting: symbio6.nl/en/sheets

🚀 In our sessions we show how reflection helps uncover mistakes and blind spots.