

Advanced Prompting Techniques



Chain-of-Thought (CoT)

Question:

Roger has 5 tennis balls. He buys 2 more cans of tennis balls. Each can has 3 balls. How many tennis balls does he have now?

Prompt:

"Let's think step by step."

- 1 Roger starts with **5 tennis balls**
- 2 He buys **2 cans** of tennis balls
- 3 Each can has **3 balls**, so $2 \times 3 = 6$ **balls**
- 4 Total: $5 + 6 = 11$ **balls**

✓ Final Answer:



Other Advanced Techniques



Few-shot Learning

Provide **multiple examples** in prompt for pattern recognition



Self-consistency

Sample **multiple outputs** and vote for most consistent answer



Tree of Thoughts

Explore **multiple reasoning paths** simultaneously



ReAct

Reasoning and acting in interleaved manner



Auto Prompt Optimization

Use **evolutionary methods** to improve prompts

11 tennis balls



Meta-prompting

Prompts that generate **prompts** for different tasks