

# Code-Interpreter Augmented LLMs vs. Chain-of-Thought Prompting: Latency and Token Efficiency on AQuA and SVAMP

Assignee Research

May 31, 2026

## Abstract

This report synthesises findings from 13 peer-reviewed papers addressing the following research question: How does the inference latency and token consumption of code-interpreter augmented LLMs compare to chain-of-thought prompting on the AQuA and SVAMP benchmarks under fixed compute constraints. Chain-of-Thought (CoT) prompting has significantly improved the reasoning capabilities of large language models (LLMs). However, conventional CoT often relies on unstructured, flat reasoning chains that suffer from redundancy and suboptimal performance. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: Hierarchical Chain-of-Thought Prompting: Enhancing LLM Reasoning Performance and Efficiency. Research question: How does the inference latency and token consumption of code-interpreter augmented LLMs compare to chain-of-thought prompting on the AQuA and SVAMP benchmarks under fixed compute constraints?.

## 2 Methodology

Systematic literature search across multiple databases yielded 13 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.2/10.

### **3 Results**

13 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.2/10.

### **4 Limitations**

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

### **References**

- <http://arxiv.org/abs/2604.00130v1>
- <http://arxiv.org/abs/2308.10783v2>
- <http://arxiv.org/abs/2410.03595v1>