

# Node Activation Analysis in Weight-of-Thought Reasoning

Task Context: Mathematical Sequence Problem

The heatmap shows node activation patterns when solving a sequence problem (e.g., "What comes next in 2, 4, 8, 16, 32?").

The model activates different specialized nodes across the reasoning steps:

Step 1: Initial input processing and parsing

Step 2: Mathematical pattern identification (noting the  $\times 2$  pattern)

Step 3: Integration of pattern information

Step 4: Verification and output of the answer (64)

## Node Activation Heatmap Across Reasoning Steps

