

All Aboard the Step-by-Step Express Answer Key

Sample Variations

Variation 1 (Direct & Explicit):

"Solve this problem step by step. First calculate the distance the first train has traveled by 4 PM, then show how the second train catches up."

Uses "step by step" and specifies sub-steps.

Variation 2 (Encouraging Detailed Reasoning):

"Explain your reasoning in detail, breaking the solution into clear steps: finding head start, calculating relative speed, and then solving for time."

Emphasizes breakdown of reasoning.

Variation 3 (Teaching Style):

"Solve the problem as if you are teaching a student. Show each step, explain why it's necessary, and then give the final answer."

Frames response as instructional, not just problem-solving.

Reflection (Sample Teacher Notes)

What words/phrases encouraged step-by-step answers?

"Step by step," "break into clear steps," "explain your reasoning," "as if teaching a student."

Would variations lead to longer, clearer explanations?

Yes-each variation nudges the AI to slow down, explain the *process*, and not jump straight to the number.

Where else could this be useful?

History: "Explain step by step how events led to the American Revolution."

Science: "Describe step by step how photosynthesis turns sunlight into energy."

Writing: "Show step by step how to write a strong thesis statement."