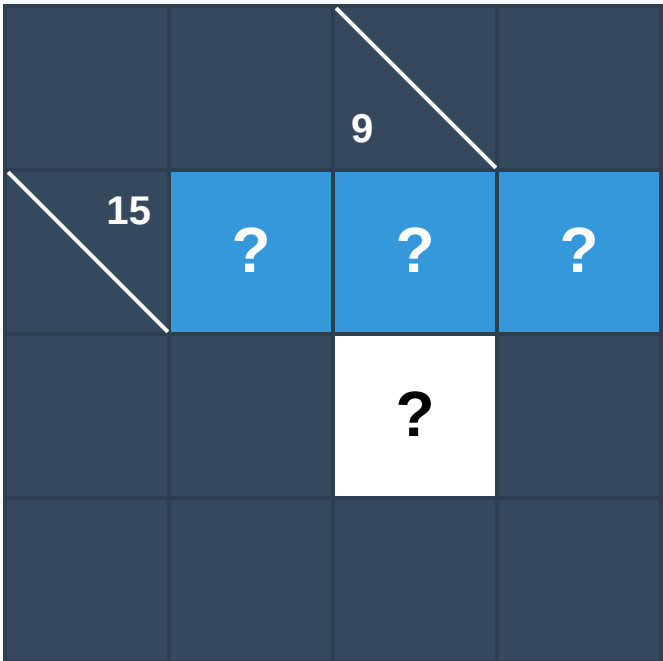# Diagram 2a: Elimination Method (Part 1: Setup)

The Problem: We need to solve an ACROSS run (3 cells, sum 15) that intersects with a DOWN run (2 cells, sum 9). Follow each grid below to see how the elimination method works step by step.
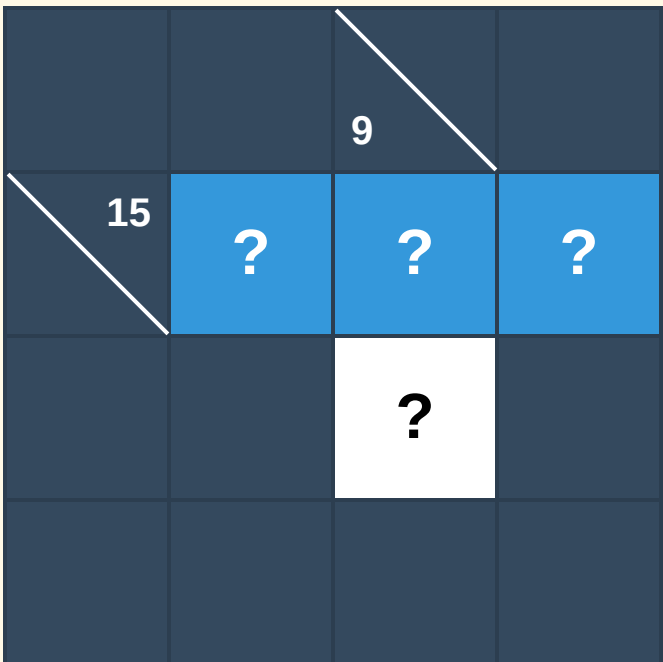
GRID 1: Initial Puzzle State

Focus on the ACROSS run (highlighted in blue)

We're solving: ACROSS run with 3 empty cells that must sum to 15

GRID 2: Possible Combinations for ACROSS (15 in 3 cells)

8 possible ways to make 15 with 3 different digits

All 8 combinations for sum of 15:

- 1+5+9
- 1+6+8
- 2+6+7
- 3+4+8

- 2+4+9
- 2+5+8
- 3+5+7
- 4+5+6