Draw a Maze: Wall Spacing, Path Continuity, and Entrance/Exit Layout

Original tasks 1, 2 / independent work

Task 1

On a 6 by 6 grid with wall spacing one cell, entrance on the top edge at column 3 and exit on the bottom edge at column 3, describe a route that uses 5 vertical moves and 0 horizontal moves. State one wall segment you must leave open.

Task 2

A 5 by 5 grid has wall spacing one cell. The entrance is on the left edge at row 2 and the exit is on the right edge at row 2. A proposed route uses 4 right moves and 1 up move. Is the move count consistent with the grid width? Explain.

Draw a Maze: Wall Spacing, Path Continuity, and Entrance/Exit Layout

Original tasks 3, 4 / independent work

Task 3

On an 8 by 8 grid with spacing one cell, you want a route with 7 right moves and 2 down moves. What is the total move count, and what is the minimum number of open edges the route must cross?

Task 4

A maze on a 7 by 7 grid has entrance on the left edge at row 4 and exit on the right edge at row 4. A wall segment blocks the edge between column 4 and column 5 in row 4. Can a route still connect entrance to exit without diagonal moves? Describe one way to check.