

## Line Maze Rules 2024 – JedoBot 2024

### Principle:

The robot must find and navigate a path connecting the starting and finishing fields in a given maze.

### Robot:

The robot must be completely autonomous.

The robot must in no case exceed the dimensional limit of 300 x 300 x 300 mm.

The dimensional control is performed by a profile with an internal dimension corresponding to the limit. The profile must touch the ground with its own perpendicular cross-section.

The robot must not release any substances; it must not pollute the track.

There is only one category, so the robot can contain any components and sensors.

Only one team can compete with one robot.

### Competition:

The competition has two rounds. The robot has at least three attempts per round. The fastest time in a given lap will count.

The overall ranking will be decided by the sum of both times from both rounds.

A maximum time of one run may be set, after which the robot will stop itself. In this case it will be removed from the field.

The robot can "scan" the layout of the maze while driving and use it in following laps. When the starting position is set, it will no longer be possible to take the robot away from the track unless all participants will finish the round.

### Disqualification:

The robot can be disqualified from the competition or from the trial.

If it is disqualified from the competition, it is treated as if it did not participate in the competition at all. A robot can be disqualified only for serious violations of the terms of the competition (e.g. fraud).

If it is disqualified from the attempt, the maximum time (e.g. 1000 seconds) will be recorded. It will be disqualified from the attempt if the robot exits the maze with its entire floor plan or has shortened its path, i.e. moves between fields if it does not lead between them direct path.

Only the referee can disqualify the robot.

**Maze:**

The maze has the shape of a white rectangle with a size of 1200 x 750 mm, which is made up from a grid of lines with a gap length of 150 mm.

Paths are created using a 15mm wide black line that runs through the grid. Paths contain dead ends and can contain loops and junctions.

There are four possible starting positions of the robots (B1, F2, E9 and A8), a starting position will be chosen by a referee. The path to the left of the starting line will be removed (e.g. when starting at F2, the line from B1 will be removed).

The end of the maze will be marked with a 150 x 150 mm black area at the intersection of the grid lines.

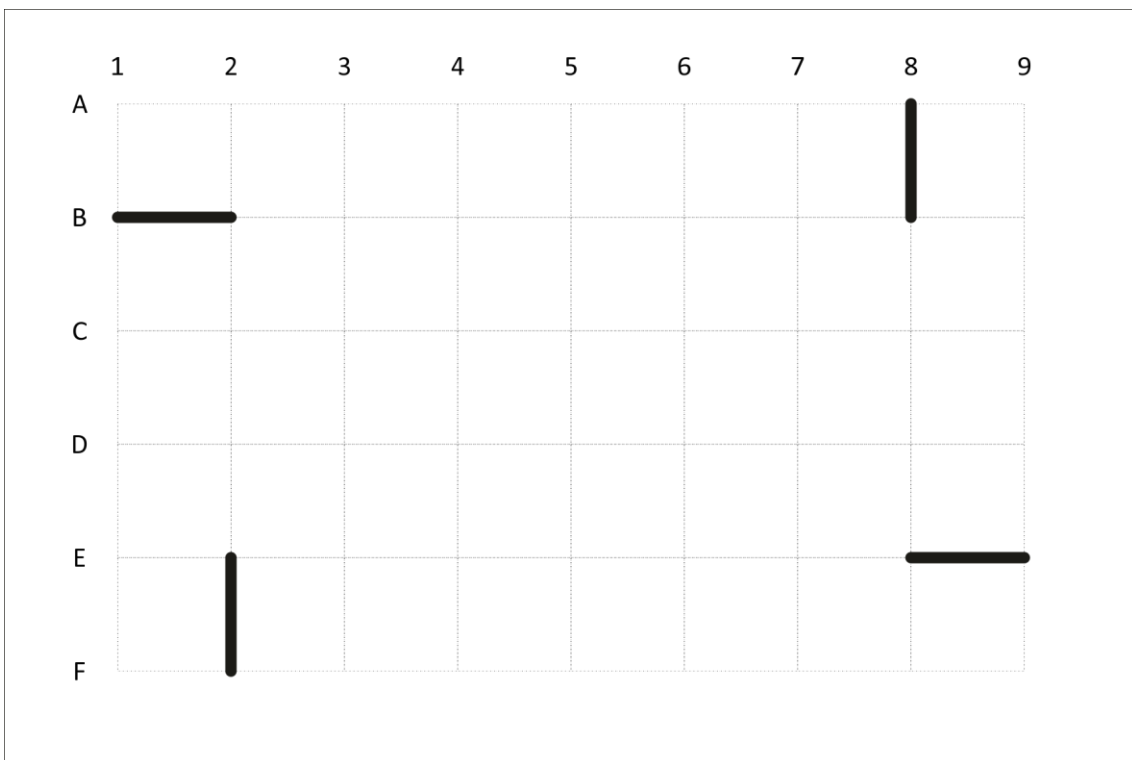


Figure 1 – Possible starting positions

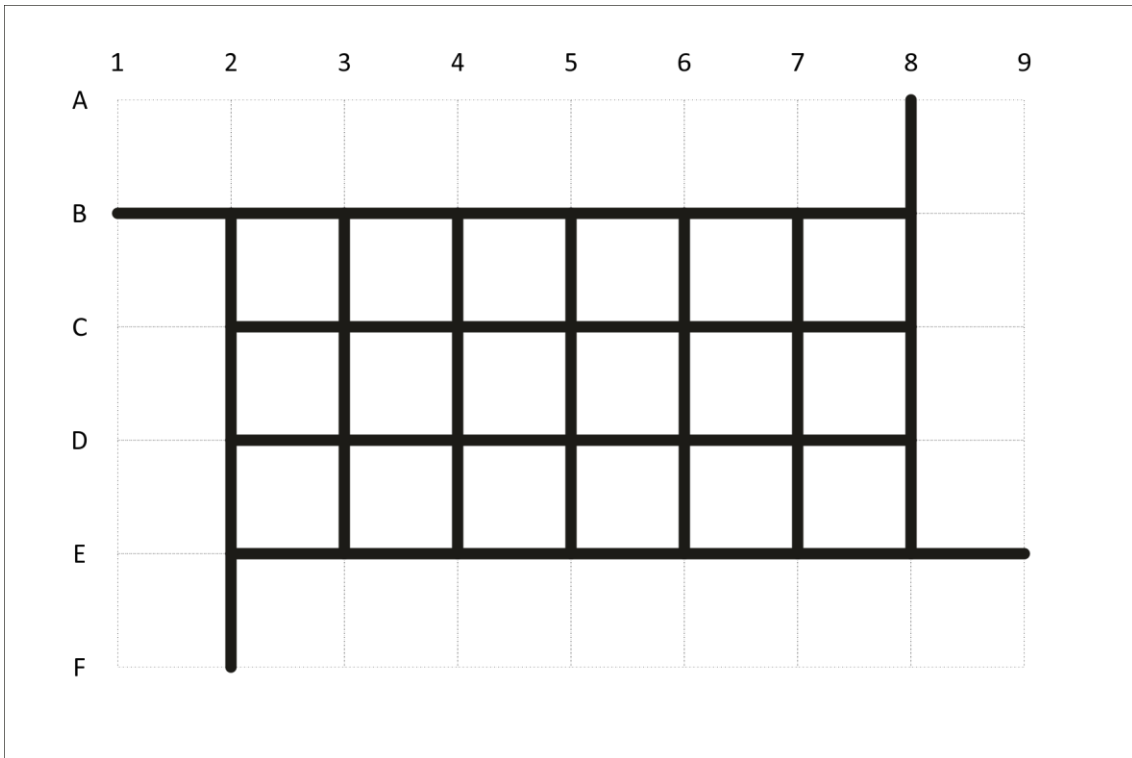


Figure 2 – Possible paths

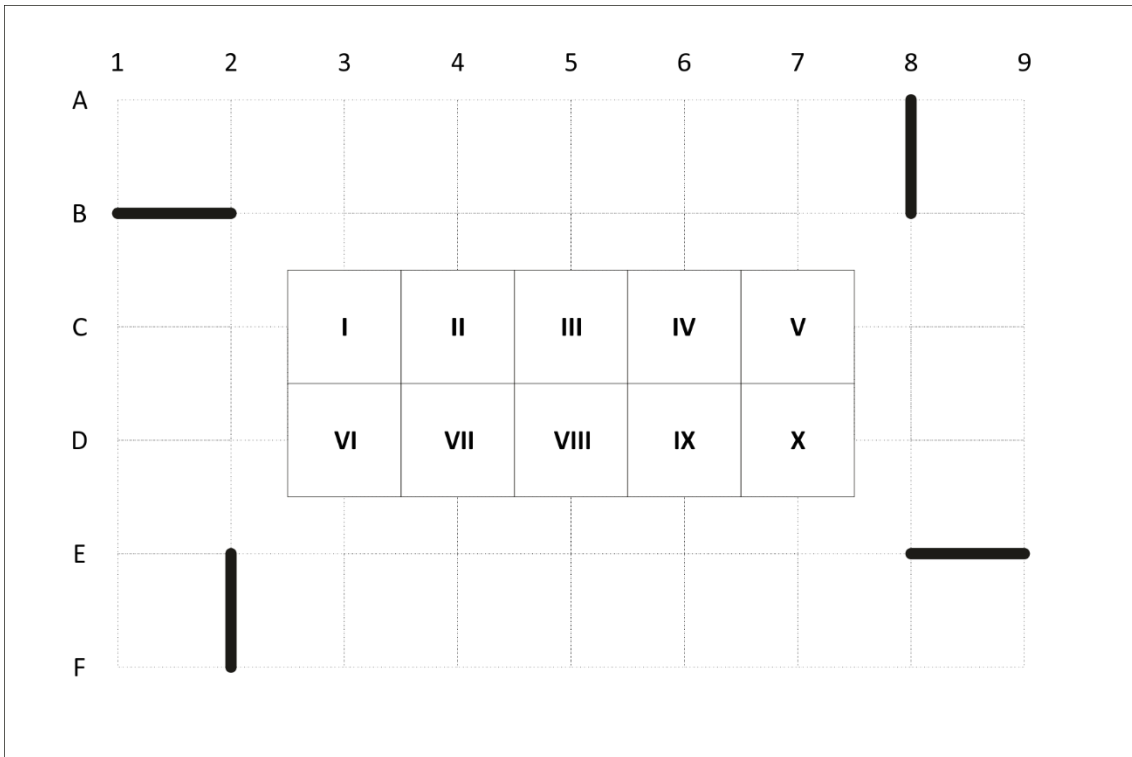


Figure 3 – Possible finishes