



"Rescue Race"

Participating team: must be conformed by 3 members and a coach over 18 years.

Allowed material: Scribbler S2 or S4, computer and Scribbler Robot software.

Challenge: The team must program its Scribbler robot to undergo a rescue race in which different obstacles will be presented. The robot has to travel the three levels of the track while overcoming the obstacles. The robot has to reach the finishing block as fast as possible, earning the highest score possible.

The teams can show their programming abilities in this fascinating challenge!

Court: The official measures are: 2.30 meters length x 1.14 meters width

Rules:

- Each team will be allowed practice time, which will be specified by the jury.
- Each team will be granted 2 rounds to participate, each with a maximum of 7 minutes.
 - The wining team will be the one with the highest score, adding both rounds. In case of a tie, the travel time will be considered as a tiebreaker.
 - The jury's decisions are unquestionable.
 - Note: The qualities of the Scribbler robot, both S2 and S3, are the same regarding to the functions that are used for the present challenge.



Restrictions

- It isn't allowed to measure the track.
- The team members can't enter the track at any time to manipulate the robot's trajectory, except if the robot is at any risk (falls).

Scoring

Level 1

4 points for going through the lower tunnel 6 points for following the black line

Level 2

8 points for going through the leds tunnel 6 points for going through the ramp number 1 6 points for going through the ramp number 2

Level 3

8 points for entering the Level 3

20 points for finding the finishing block before the time limit. The robot has to stop in front of the finish block, turn on the leds and emit a sound, as

Bonus

5 bonus points for a perfect trajectory, which means, the robot didn't touch the walls or any other elements in the court during its journey.

Penalty points and special situations

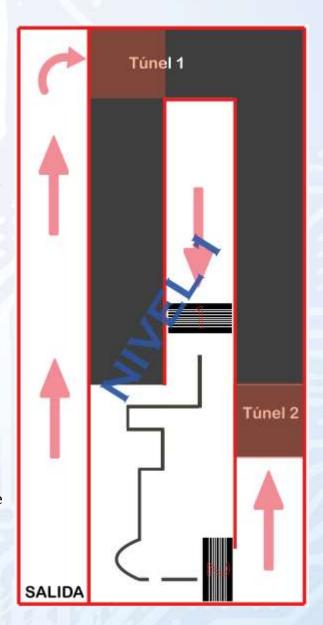
If a robot gets lost in any level, the team can choose between the following actions:

- Go back to the beginning of the level, starting from cero points, and try to recover as many points as possible.
- Start at the next level, assuming that the points earned in the past level will be lost.



Travel:

- 1. 1 Before starting, a team member must take a ball from the urn. The ball will indicate, with a number between 1 and 9, the position in which the finishing block will be placed.
- 2. A team member will turn on the robot in the starting point. The robot must move forward through the end of the court and then turn into the first tunnel.
- 3. Subsequently, it must go through the first tunnel and continue through the path marked with a black line.
- 4. It the path marked with a black line, the line followers must be used.
- 5. Then, it must continue its trajectory until it reaches the second tunnel, which will have the leds turned off. The Scribbler robot must remain immobile once it detects the darkness, then it has to move forward throughout the tunnel, reaching the end once the leds are turned on.
- Reaching the end of the tunnel, the Scribbler robot will encounter the first ramp, which it has to go over to enter the second level and continue its way until it gets to the next ramp.





7. Once in the third level, the Scribbler robot must locate the finish block, which has to be placed on the box with the number that was chosen at the beginning of the challenge.

