

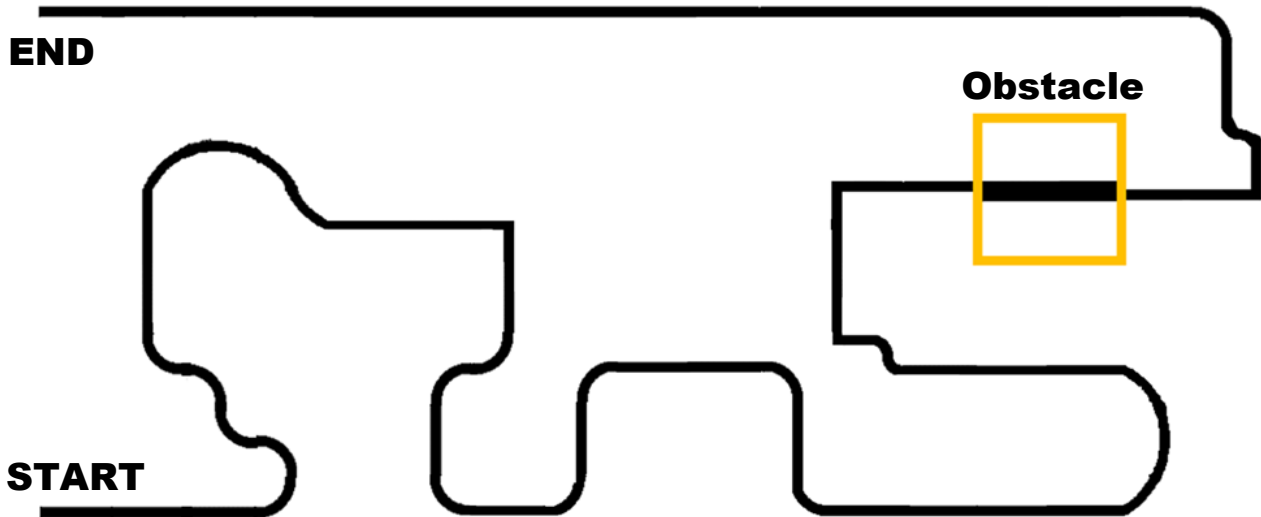
Junior Category

Line Tracing (LEGO NXT/RCX/EV3)

No. of Participants per team - Max. 2 students per team

No. of Robots per team - 1 robot per team

Playfield



Thickness of line: 2.5 cm

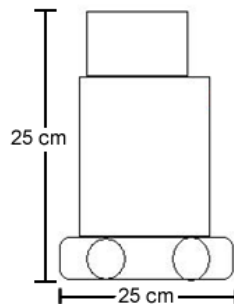
Thickness of line at obstacle: 5 cm

Playfield is built using plegofield. All measurements are based on Plego Field.

Obstacle



Robot Specifications



(Not to scale)

The size of each robot shall be limited to **25cm** (H) by **25cm** (W) by **25cm** (L).

Rules

1. A match shall be played by only **1** robot per team.
2. Only **LEGO (NXT/RCX/EV3)** parts are to be used to build the robot. There are no limitations to the amount of parts used to build the robot.
3. You are **allowed** to use parts across the abovementioned platforms for the robot.
4. Each robot must be programmed to be fully **autonomous/independent**.
5. Each robot must comply fully to the **size** restriction, even after all the appendages have been fully expanded.
6. The robot **can deploy any tactics or maneuvers**, as long as it does not constitute a foul.***
7. While the match is in progress, at any time when the referee whistles, the human operator should **stop** the robot.
8. Robots are allowed to use **a maximum of TWO** Light/Color sensors

Method of Scoring

- **The winner will be the robot which has achieved the fastest timing.**
- All robots must pass the finishing line in order for the attempt to be considered valid and time to be recorded.

Game Play

- Each robot will be given **2** attempts to complete the whole course. The best timing from the **2** attempts will be taken as the **final** score.
- Timing will begin once the back of the robot crosses the **Start Point**.
- Robots are to maneuver through the whole course using only **a maximum of TWO** Light/Color Sensors.
- Timing will stop once the back of the robot crosses the **End Point** after one lap.

Fouls***

1. Touching/pushing the robot while the match is in progress.
2. If Robot is unable to move off **5** seconds after start whistle.
3. More than 2 light/colour sensors are used.
4. Robot does not comply with the size restrictions.



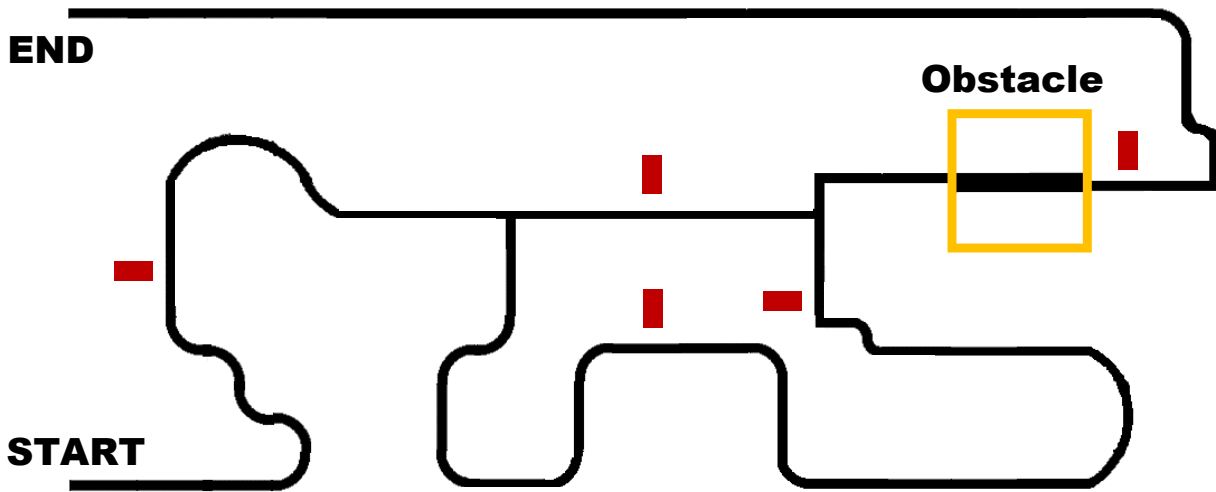
Senior Category

Line Tracing (LEGO NXT/RCX/EV3)

No. of Participants per team – Max. 2 students per team

No. of Robots per team – 1 robot per team

Playfield



Thickness of line: 2.5 cm

Thickness of line at obstacle: 5 cm

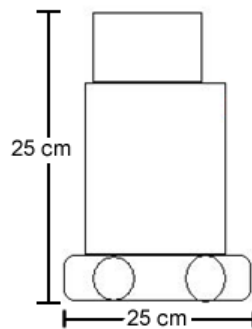
Playfield is built using plegofield. All measurements are based on Plego Field.

Checkpoints (illustration): ■

Obstacle



Robot Specifications



(Not to scale)

The size of each robot shall be limited to **25cm** (H) by **25cm** (W) by **25cm** (L).

Rules

1. A match shall be played by only **1** robot per team.
2. Only **LEGO (NXT/RCX/EV3)** parts are to be used to build the robot. There are no limitations to the amount of parts used to build the robot.
3. You are **allowed** to use parts across the abovementioned platforms for the robot.
4. Each robot must be programmed to be fully **autonomous/independent**.
5. Each robot must comply fully to the **size** restriction, even after all the appendages have been fully expanded.
6. The robot **can deploy any tactics or maneuvers**, as long as it does not constitute a foul.***
7. The robot is considered out of the line once the entire robot is not on the line. **Once out of line, the timing will stop.**
8. While the match is in progress, at any time when the referee whistles, the human operator should **stop** the robot.
9. Robots are allowed to use ONLY **a maximum of TWO Light/Color sensors** ***

Method of Scoring

- **The winner will be the robot which has achieved the most number of points within the shortest time.**
- 20 points will be awarded when each checkpoint is crossed. There are a total of 5

checkpoints.

- All robots must pass the finishing line/checkpoints in order for the attempt to be considered valid and time to be recorded.

Game Play

- Each robot will be given **2** attempts to complete the whole course. The best timing from the **2** attempts will be taken as the **final** score.
- Timing will begin once the back of the robot crosses the **Start Point**.***
- Robots are to maneuver the whole course using **a maximum of TWO** Light/Color Sensors only.
- Timing will stop once the back of the robot crosses back the **End Point**

Fouls

1. Touching/pushing the robot while the match is in progress.
2. If Robot is unable to move off **5** seconds after start whistle.
3. More than 2 light/colour sensors are used.
4. Robot does not comply with the size restrictions.