International Youth Robot Competition (IYRC) 2025 Korea

RULES & REGULATIONS

Version 1

Overview

1. Date: 5th & 6th August 2025
2. Venue: Chungnam, Korea
3. Organizer: International Youth Robotics Committee (IYRA)
4. Co-organizer:
4. Participants: More than 2,000 participants from 30 countries around the world.

Competition Categories

Kinder (below 8 years old) – by birth year 2017
1. Robot Bowling (Kinder Skill)
2. Mini-mini Robot Soccer (Kinder Skill)
3. Math Challenge (Kinder Skill)

Junior (8-13 years old) – by birth year 2012
1. Animal Kingdom (Junior Coding)
2. Math Challenge (Junior Skill)
3. Push-push (Junior Skill)
4. [AI] AI F1 Racing Car (Junior Skill)
5. [AI] AI Robot Soccer (Junior Skill)

Senior (13-18 years old) – by birth year 2007
1. Save the forest (Senior Coding)
2. Robot Volleyball (Senior Skill)
3. Autonomous Push-push (Senior Coding Skill))
4. [AI] AI Park Golf Challenge (Senior Skill)
5. [AI] AI Coding Team Mission (Senior Coding)

Compulsory (Junior + Senior)
1. Creative Robot Design – "Let's startup Entrepreneurship! AI Life with My Robots"

Open
1. Humanoid Robot Mission
2. Genibot Coding Mission
3. Cocomon Go
4. Game Maker Kit Game Challenge

KINDER CATEGORY

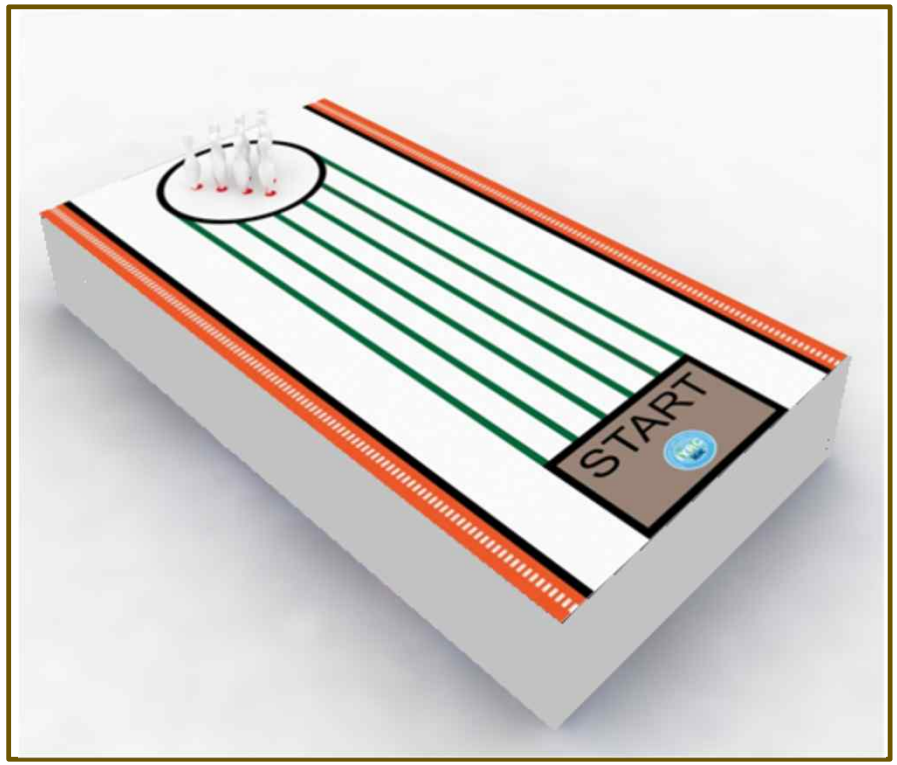
Robot Bowling

Mini-mini Robot Soccer

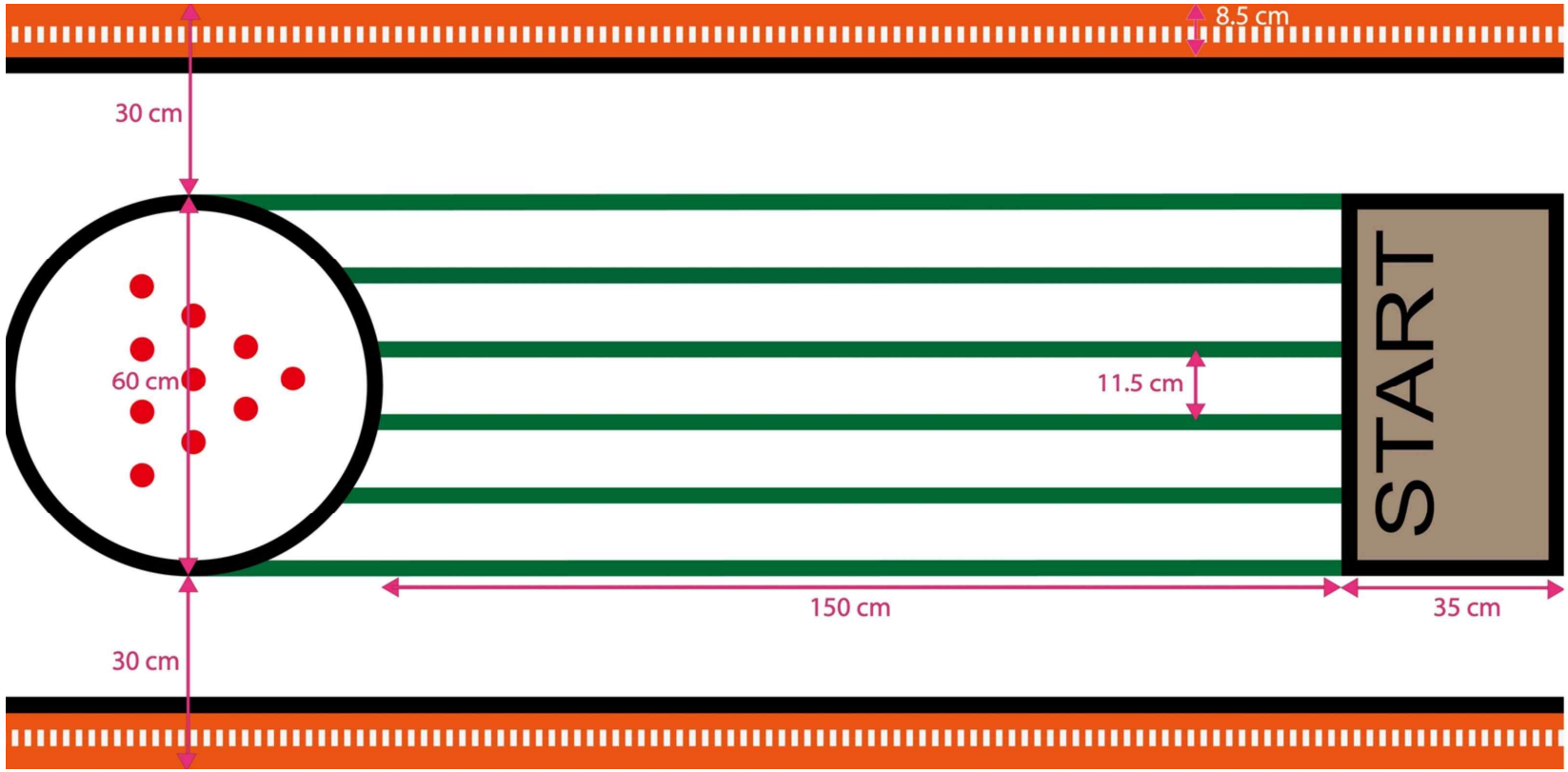
Math Challenge

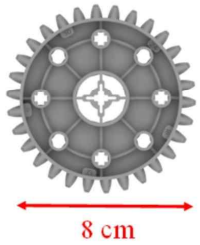
KINDER : ROBOT BOWLING

Age	**< 8**
Category	Individual Mission
Robot Kits Allowed	GOMA & BRAIN
Mission	Throw ball to knock down pins from start box
Robot Building	Pre-build & on the spot Card Programming



ROBOT BOWLING GAME FIELD





ROBOT BOWLING GAME RULES

Dimensions & Restrictions

- Initial size shall not exceed 35cm (H) X 35cm (W) X 35cm (L).
- Robots are allowed to expand to any size after the game starts
- Robots are **Strictly NOT ALLOWED** to have any foreign parts (including rubber band, black tape or scotch tapes) other than the parts in GOMA & BRAIN
- Robots are not allowed to have any power supply above 6V DC (Volt of Direct Current).

Game Duration

- 3 minutes is given from the point of receiving programming cards and reader from referee
- 2 rounds whereby each round will have 3 attempts to shoot, (total of 6 attempts)
- Time taken to replace the pins will not be counted within the 3 minutes given

ROBOT BOWLING GAME RULES

Scoring

- Programming : If participants are able to program the robot by themselves (10 marks)
- Programming : If participants request referee's help to program the robot (0 marks)
- Shooting : 1 point for each pin knocked down
- Reset of pins : Reset of pints only during the first attempt of each round, or when a Strike or a Spare occurs during previous attempts.
- Strike : When all 10 pins are knocked down in one attempt
- Spare : When balance of pins are knocked down in 2nd attempt

ROBOT BOWLING GAME RULES

Game Play Details

- Programming cards & card readers will be provided by organizer.
- The participant will be disqualified if batteries used does not have original voltage label indicating the battery voltage.
- Participant's Robot must always stay within the start box throughout the mission. If the robot moves out of the start box when shooting, it is a foul and no points will be given to the participant for that attempt.

Win/Lose Criteria

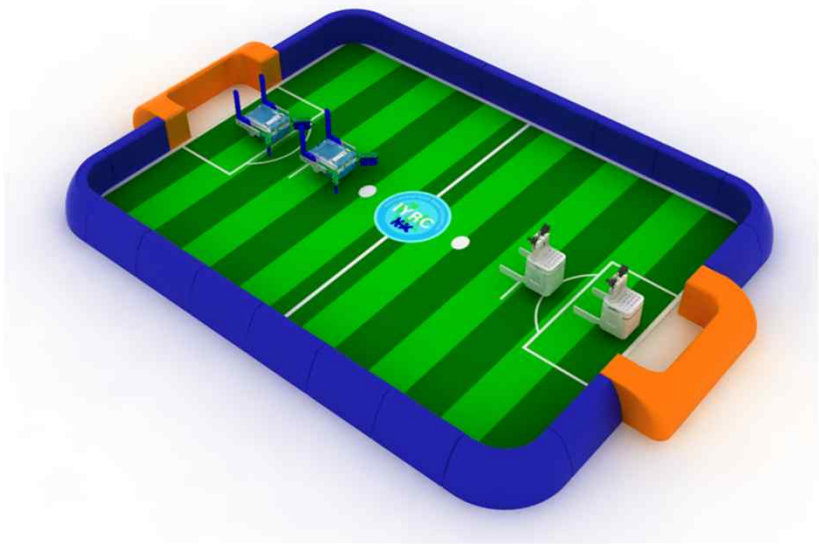
- Participant with the highest score will be the winner.
- If same points occur, the higher points from the first attempt will be compared to determine the winner, if the points are the same the second attempt would then be compared, so on and so fourth until the last attempt.
- In the case whereby all points are the same, the date of birth of the participant would be compared. The younger participant would be the winner.

ROBOT BOWLING SCORE EXAMPLE

Child	1st	2nd	3rd	4th	5th	6th	Programming	Total	Ranking
A (6yo)	10	10	10	10	10	10	10	70	1
B (7yo)	10	10	10	10	10	10	10	70	2
C	10	8	2	10	7	3	0	40	3
D	8	2	10	5	3	2	10	40	4
E	4	3	1	10	5	2	10	35	5
F	4	3	1	10	4	3	10	35	6

KINDER : MINI MINI ROBOT SOCCER

Age	**< 8**
Category	Team of 2 (Tournament)
Robot Kits Allowed	GENIBOT / COCONUT
Mission	Bluetooth control robot to play soccer game
Robot Building	Pre-build Bluetooth control robot



MINI MINI ROBOT SOCCER GAME FIELD

Starting position for each team

MINI MINI ROBOT SOCCER GAME RULES

Dimensions and Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- Maximum up to 2 DC motors are allowed.
- Robot cannot be designed with a closed structure to handle the ball. The judge will check the robot structure before the competition starts.

Game Duration

- Each game is stipulated for 3 minutes.
- Each match is stipulated for 2 rounds with each round's duration for a maximum of 1.5 minute. After the end of each round the players are to switch to the opposite side of the game field. (Only apply to Semi-final and Final game)
- Extension of rounds is only when both sides have the same score. The extension round would be for a maximum of 1 minute. At the event of the same score after the extension round penalty shoot out will commence until a winner is found.

Starting Position

- Each team will place their robot's in front of starting position as indicated in Soccer Game Field diagram before the match/round begins.

MINI MINI ROBOT SOCCER GAME RULES

Game Play Details

- Team variants (participants have to declare to referee which variant they choose before each match, these roles cannot be changed during the match):
  - 1 Defender & 1 Strikers
- Defender
  - cannot leave own area (own half of the field), therefore cannot enter opponents area.
  - allowed to enter own penalty area with non-stop movement to protect the goal, but is **Not Allowed** more than 10 continuous seconds inside the penalty area or being stationary (not moving) inside penalty area.
- Striker
  - Allowed to enter both own and opponent's area
  - Allowed to enter opponent's penalty area to score goal, but not more than 10 continuous seconds inside opponent's penalty area.
  - Not allowed to enter own penalty area.

MINI MINI ROBOT SOCCER GAME RULES

Game Play Details

- Fouls:
  - Any offender will be issued a yellow card. Upon receiving 2 yellow cards within a match, the player will be removed from play for 1 minute. After 1 minute the offender can re-enter the game field upon referee's approval. If an offender receives it's 4th yellow card within a match they are removed from play for the rest of the match.
  - When a goal is scored but at the same time or immediately before a foul is made by the same team who scored the goal, the goal would not be valid. (eg: when defender enters opponent's area when goal is scored)
- Type of fouls:
  - A robot that purposely block the ball against the side of the field and does not move.
  - A Defender that enters the opponent area
  - A Striker that enters own penalty area
  - A Defender or Striker that stays inside the penalty area for more than 10 continuous seconds
  - A Defender that purposely not moving in own penalty area to block the goal post
  - A participant who ignores the instruction of the referee
- Dead Ball:
  - When the ball is held by a robot and not able to move (stalemate) for more than 5 seconds.
  - Referee will blow the whistle and all robots must stop. Referee will place the ball accordingly to the situation and the game will resume with referee's instruction.
  - If this happens more than 3 consecutive times, the ball will be placed at the middle and all robots are to return to their starting position.

MINI MINI ROBOT SOCCER GAME RULES

Game Play Details

- Penalty shoot-out in the event of a draw (each participant has to take turn for penalty shoot-out):
  - Ball will be placed on the white dot.
  - Robot which is making the penalty shot should start its movement in the mid field circle to hit/push the ball into the goal without any part of the robot's body crossing the white line.
  - 3 attempts will be given for each team to score as many goals possible.
  - If both teams has the same score after the 3 attempts a Sudden Death will occur.
- Sudden Death:
  - Each team will send 1 representative for the sudden death round. The representative has 1 chance for a penalty shoot-out. If one team manages to score while the other did not, the scoring team will be the winner. In the event that both teams scores or misses a 1v1 match will begin.
  - The first team to score in the 1v1 match will be the winner.

Scoring

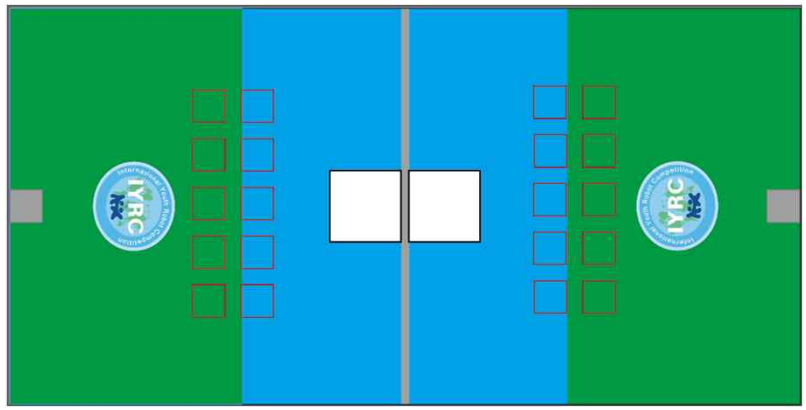
- Each goal is 1 point awarded to the scoring team.
- A goal occurs when the ball is being pushed/hit/rolled into the goal post passing the line.

Win/Lose Criteria

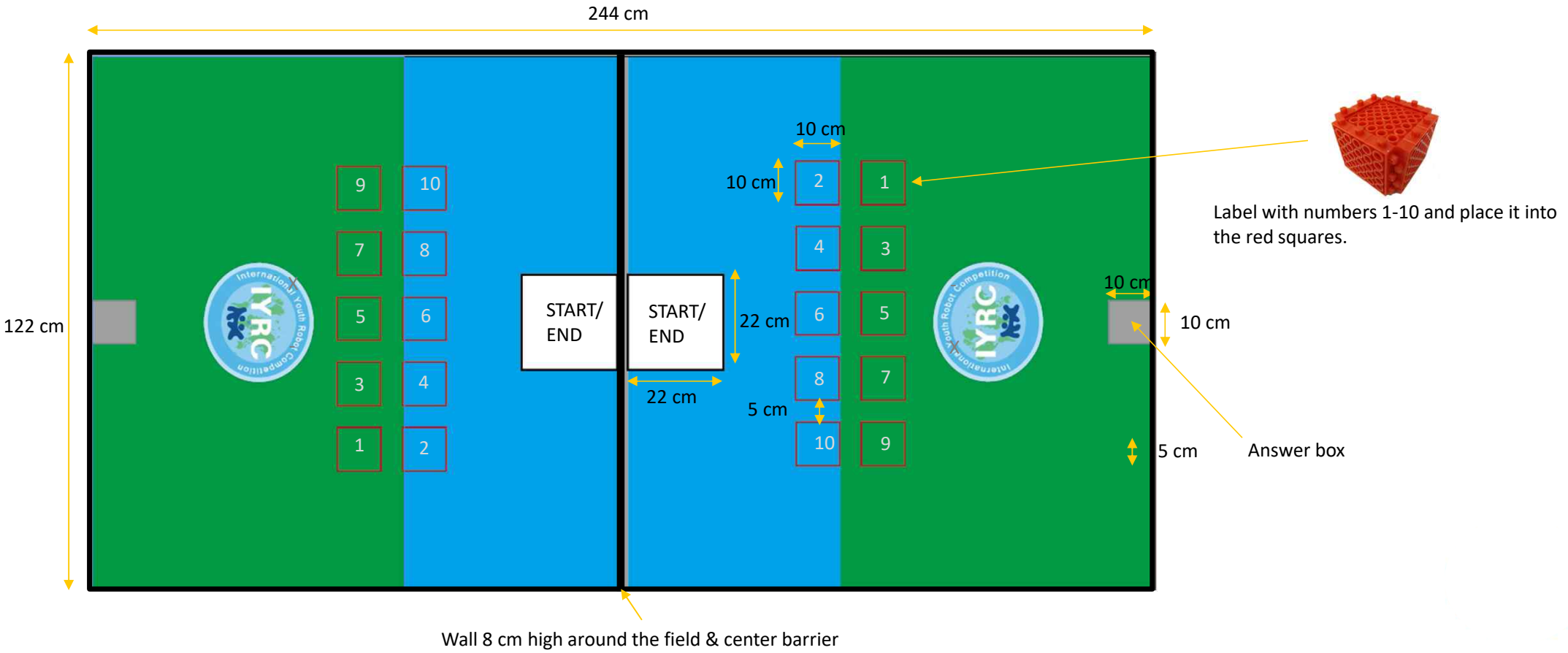
- The team with the most goals wins.

KINDER : MATH CHALLENGE

Age	**< 8**
Category	Individual
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Push answer block to the answer box.
Robot Building	Pre-build remote control robot



MATH CHALLENGE GAME FIELD



Random Pick Math Card

A stack of math cards will be shuffle and let the participant to pick.

1+1=	2+1=	2+2=	4+1=
4+2=	3+5=	3+4=	4+5=
2+8=	6-5=	9-7=	8-5=
7-3=	6-1=	10-4=	10-3=
10-2=	10-1=		

MATH CHALLENGE GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- Maximum 4 DC motors and 1 mainboard.

Game Duration

- 3 minutes game.
- Solve as many math question as possible.

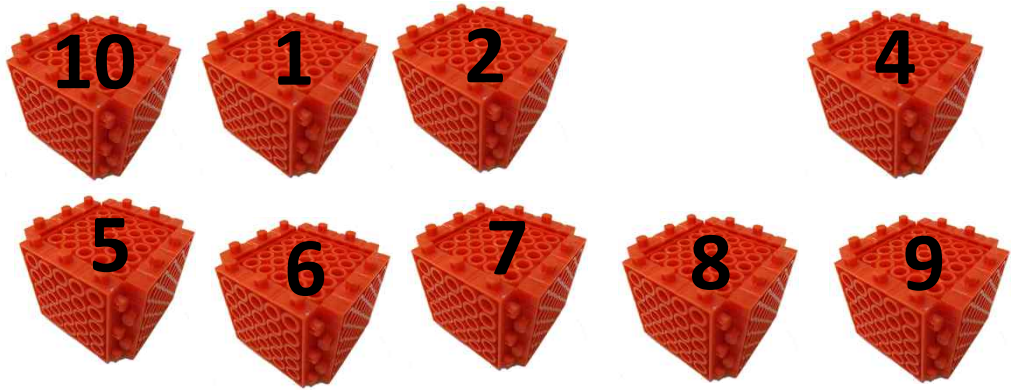
Game Play Details

- Robot should stay inside the white square and wait for referee's instruction.
- Once the match has begun, participant should pick a math card randomly form a deck of cards. Then robot must move and push the desire answer block into the grey box.
- Once it is done, robot should back to the start/end box and pick another card to solve the math problem. The answer block will also be reset.
- Solve as many math problem as possible during the 3 minutes game play.

Scoring

- Robot successfully pushes correct answer block into grey box. (10 points each)
- Robot back to Start/End box each round. (10 points each)

MATH CHALLENGE GAME EXAMPLE



2+1=

Participant pick this math card

These blocks (numbers) are to push into the answer box (grey box)

Answer for the math card

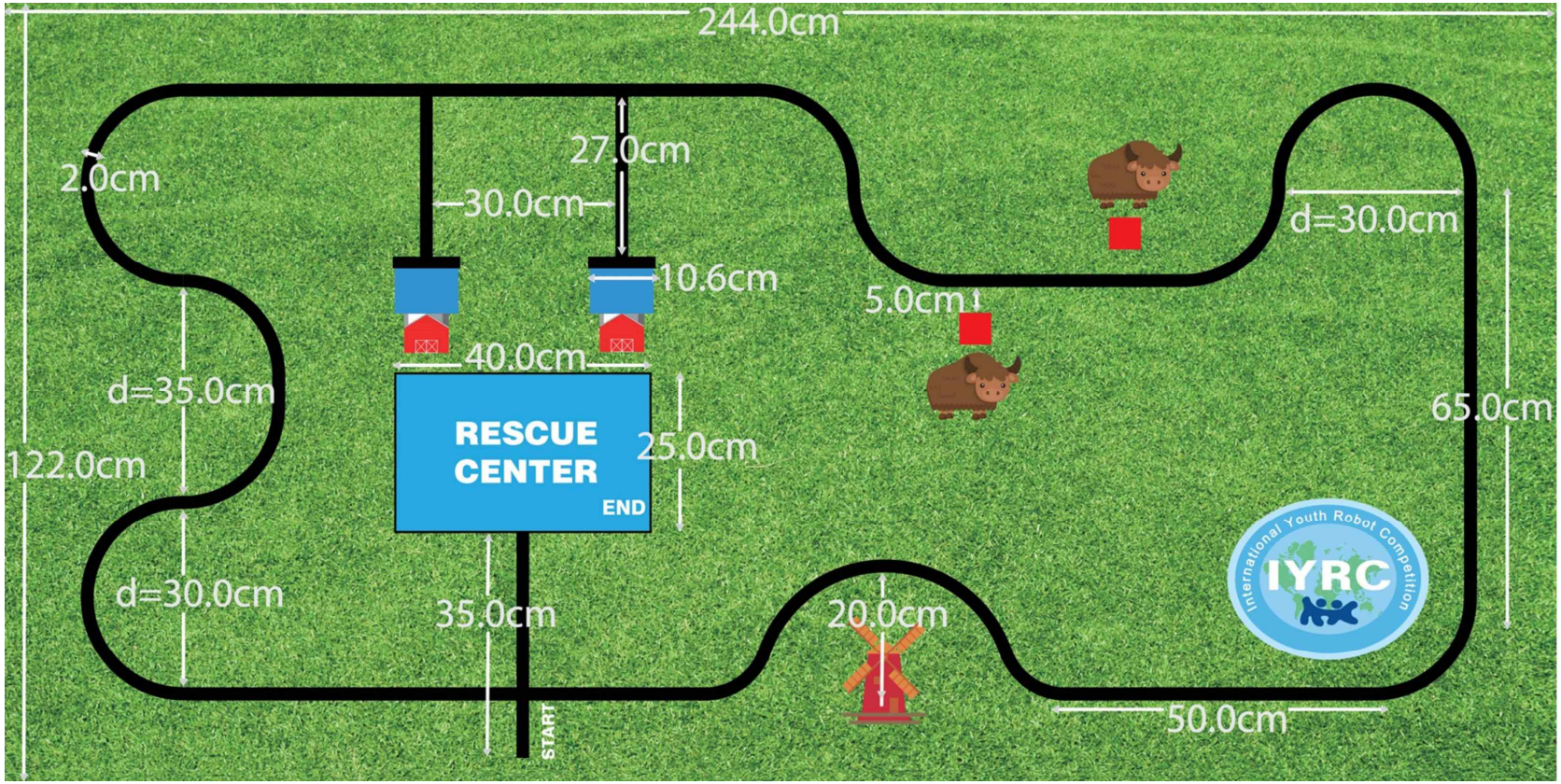
JUNIOR CATEGORY

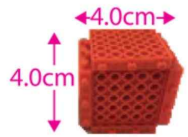
Animal Kingdom
Math Challenge
Push-Push
[AI] AI F1 Racing Car
[AI] AI Robot Soccer

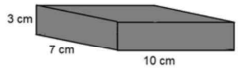
JUNIOR : ANIMAL KINGDOM

Age	**8-13**
Category	Individual Timed Mission
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Program robot to trace line and complete the missions
Robot Building	Pre-build & pre-programmed

ANIMAL KINGDOM GAME FIELD

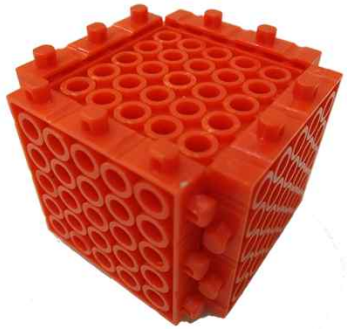






INJURED ANIMAL & FOOD

For injured animals and food, it is as picture on right it assembled with 6 pcs of 5*5 blocks.

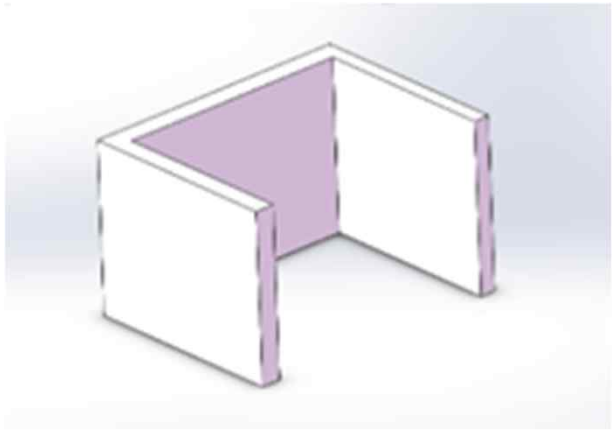


Food will be placed on a stage of 3cm(H) x 5cm(W) x 10cm(L) like picture on the right

ANIMAL BARN & FOOD

Horse & Cow barn ：

L : 8cm, H : 8cm , W:8cm



Power Generator Switch:

L: 20cm, H : 7cm ,

Cube:

L : 7cm, H : 5cm , W:7cm

ANIMAL KINGDOM GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- Maximum 4 DC motors, 5 IR sensors, 2 servo motors, 1 tracer sensor block and 1 mainboard.

Game Duration

- Each match is stipulated for 2 rounds with a total duration for a maximum 3 minutes.
- Game may end before 3 minutes when :
  - Completion of 2 rounds
  - Disqualification of a participant
  - When referee judges that the continuation of the match is impossible

Scoring

- Robot successfully pushes food into barn shed. (15 points each)
- Collect injured animals at the road side. (5 points each for removing them from the injured area)
- Switch the generator on by spinning the long stick at the semi-circle. (20 points)
- Successfully bringing the injured animals back to the Rescue Center. (10 points for each animal)
- Robot stops at the Rescue Center. (20 points)

ANIMAL KINGDOM GAME RULES

Game Play Details

- Robot should stay behind the starting line (distance from starting line to the Robot IR sensors not exceed 5cm) and facing west (R&R map position as the reference). Timer starts when the robot's IR sensors cross the starting line.
- Once the match has begun, the robot must move by its own to complete the following task:
  - Task 1 : Push the food into horse and cow barn.
  - Task 2 : Carry the two injured animals away from their initial location.
  - Task 3 : Switch on the power generator by passing through the semi-circle following the line and pushing the long stick, robot that does not follow the line and move to the next checkpoint would not be awarded points.
  - Task 4 : Make sure all injured animals carried by robot is placed into the Rescue Center. No points awarded if any part of the injured animals is out of the Rescue Center's black box.
  - Task 5 : Robot stops at the Rescue Center with any part of the robot's body stays inside the Rescue Center area.

Win/Lose Criteria

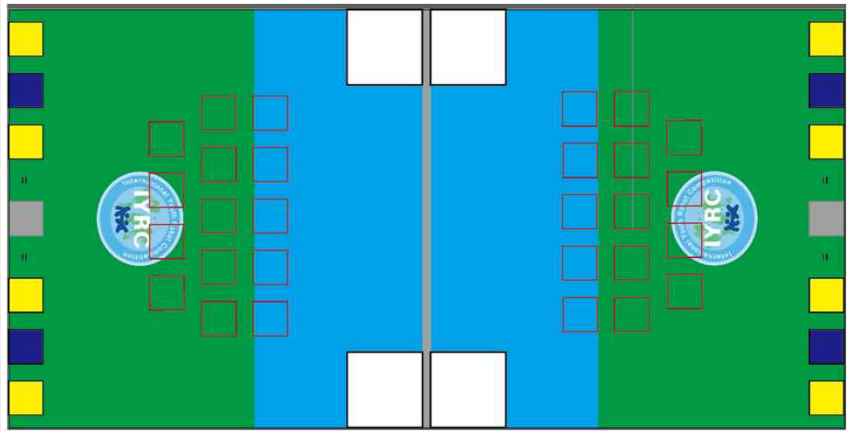
- Highest score of the two attempts will be used for ranking of winners.
- Participant with the highest score is the winner. If there are two or more participants with the same score, the lowest time recorded to finish the mission is the winner.
- If both points and time of participants are the same, the participant who is younger would be the winner.

ANIMAL KINGDOM SCORE EXAMPLE

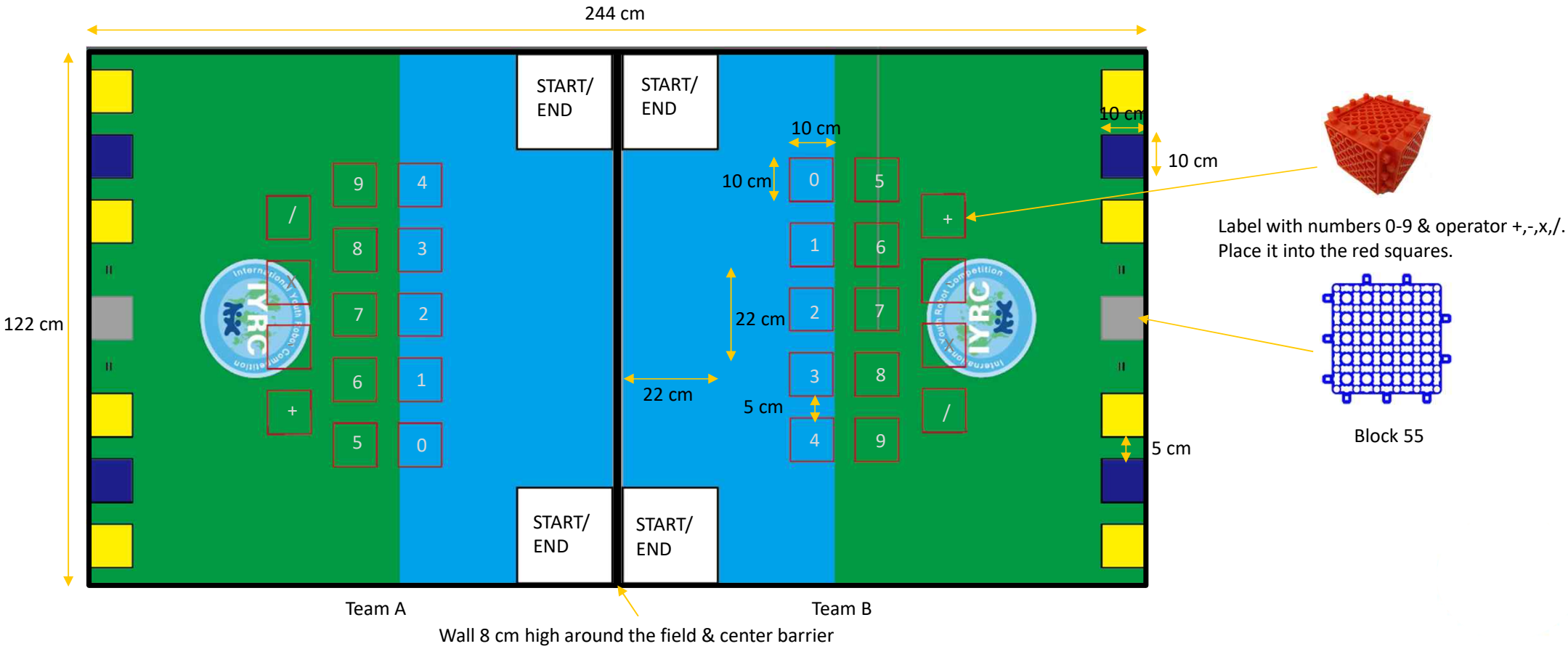
Child	Task 1	Task 2	Task 3	Task 4	Task 5	Total Points	Time Taken	Rank
A (9yo)	30	10	20	20	20	100	150	3
B (7yo)	30	10	20	20	20	100	150	2
C	30	10	20	20	20	100	130	1
D	30	10	20	20	0	80	120	4

JUNIOR : MATH CHALLENGE

Age	**8-13**
Category	Team 2 VS 2 (Tournament)
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Push blocks to form equation
Robot Building	Pre-build remote control robot

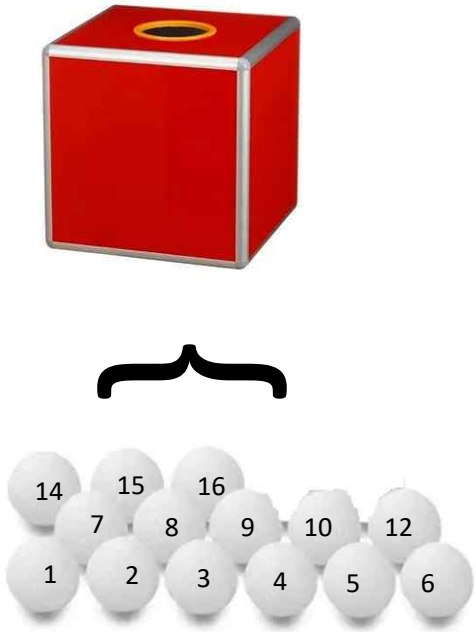


MATH CHALLENGE GAME FIELD



Random Pick Number

14 table tennis ball label with numbers put inside a lucky draw box.



MATH CHALLENGE GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- Maximum 4 DC motors and 1 mainboard.

Game Duration

- 3 minutes max.

Game Play Details

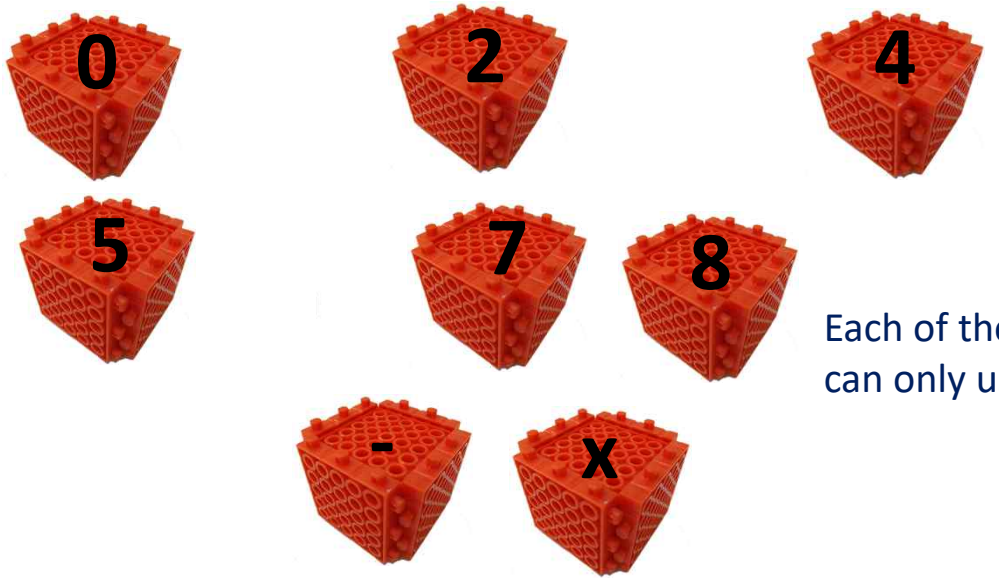
- Robots should stay inside the Start/End box and wait for referee's instruction.
- One participant from each team will pick a number form the lucky draw box. The number will be place on the block 55 of their field.
- Once the match has begun, the robots must move and push the desire number block and operator block into the yellow and blue square to form the correct equation.
- After the correct equation is formed, both robots must return to its start box (white square) in order to declare the completion of the game.

MATH CHALLENGE GAME RULES

Win/Lose Criteria

- Team that finish the game earlier will be the winner.

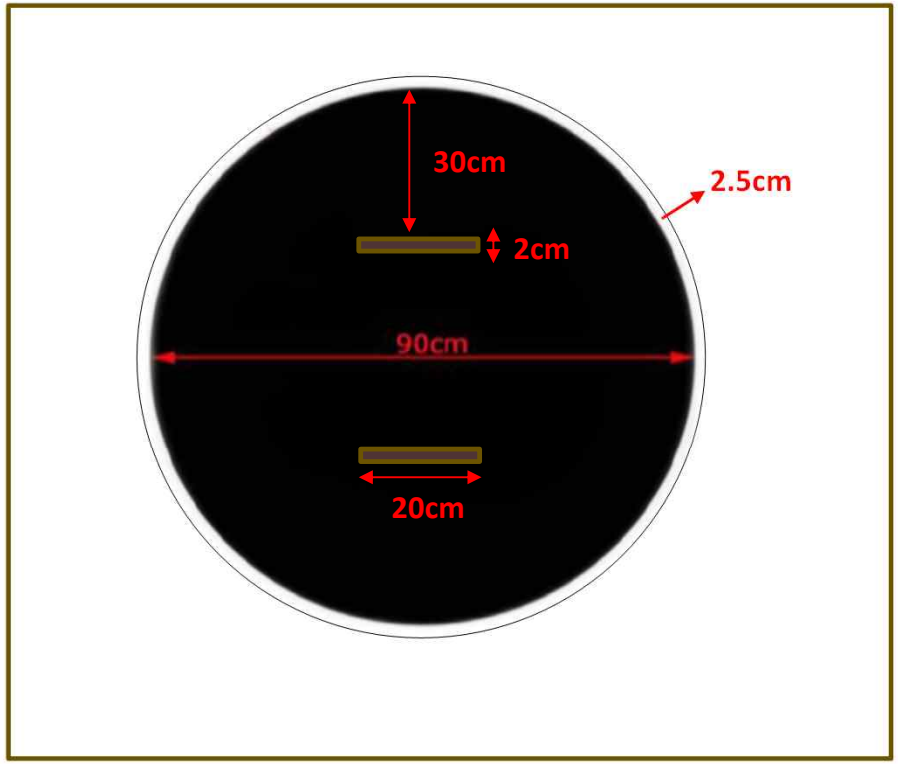
MATH CHALLENGE GAME EXAMPLE



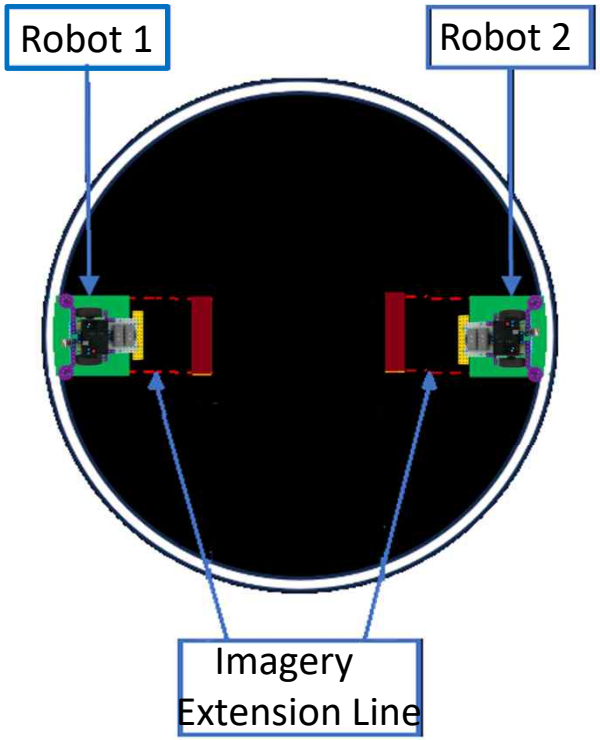
Each of these square box (numbers and operators) can only use once to form the equation.

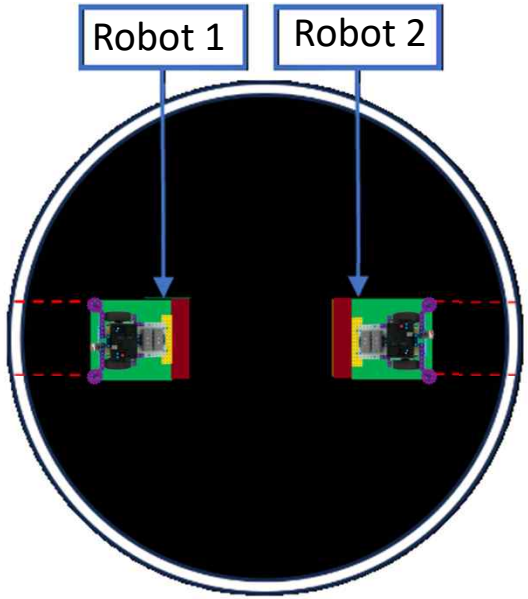
JUNIOR : PUSH-PUSH

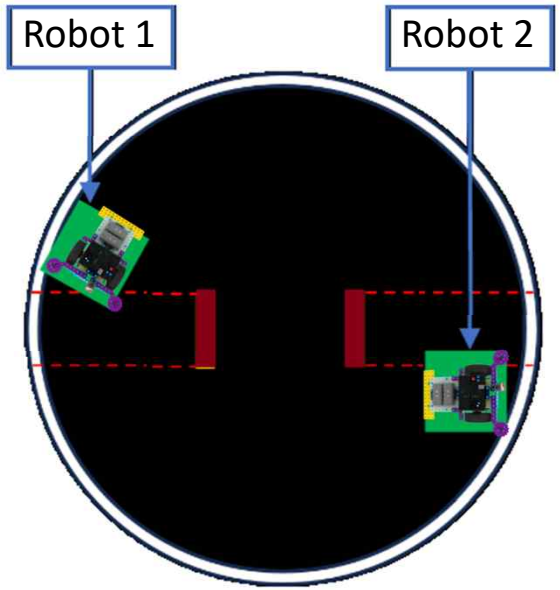
Age	**8-13**
Category	1 vs 1 Tournament
Robot Kits Allowed	MRT Series & HUNA educational robot kit (Exclude Kicky and Brain kit)
Mission	Remote control robot push opponent outside of the black ring
Robot Building	Pre-build remote control robot



PUSH-PUSH ROBOT PLACEMENT







Robots are allow to place in any position on the game field as long as the wheel is in the imagery extension line.

PUSH-PUSH GAME RULES

Dimensions, Weight and Restrictions

- The robot must adhere to a maximum size of 20cm (H) x 20cm (W) x 20cm (L) and may not exceed these dimensions at any point after the game has commenced.
- The robot's maximum weight, including batteries, must not exceed 1 kg.
- The robot is permitted a maximum of 4 DC motors, 2 servo motors and 1 mainboard.
- No modifications to the parts are allowed, including bending, sharpening, or altering their shape. All components must remain in their original form.

Game Duration

- Each match consists of 3 rounds, with a maximum duration of 1 minute per round.

Scoring

- Draw: If both robots are still moving and remain within the play field, each robot will be awarded 1 mark.
- Draw: If both robots fall off the play field at the same time, neither robot will receive any marks.
- Win: A robot wins if it pushes at least half of the opponent's robot out of the play field or if the opponent's robot is unable to return to the play field. The winner receives 2 marks, while the loser receives 0 marks.

AUTONOMOUS PUSH-PUSH GAME RULES

Game Play Details

- First whistle
  - Both participants place the robot at the same time on the game field according to the placement criteria, ensuring compliance with the permitted placement guidelines. Not allow to change the robot's position after the placement done. Turn on the robot and ready for remote control. Participant is require to step away 1 foot from the game field and get ready.
- Second whistle
  - The robot will then begin engaging the opponent autonomously, attempting to push opponent off the game field.

Win/Lose Criteria

- The robot that pushes the opponent's robot off the playfield within 1 minute will be declared the winner of the round. If both robots fall off the playfield simultaneously, the round will result in a draw.
- If more than half of the robot's body is pushed outside the playfield (as determined by the referee), or if the robot is unable to return to the ring, it will be considered a loss for the round.
- In the event of a draw after 3 rounds, the participant with the lighter robot will be considered the winner.

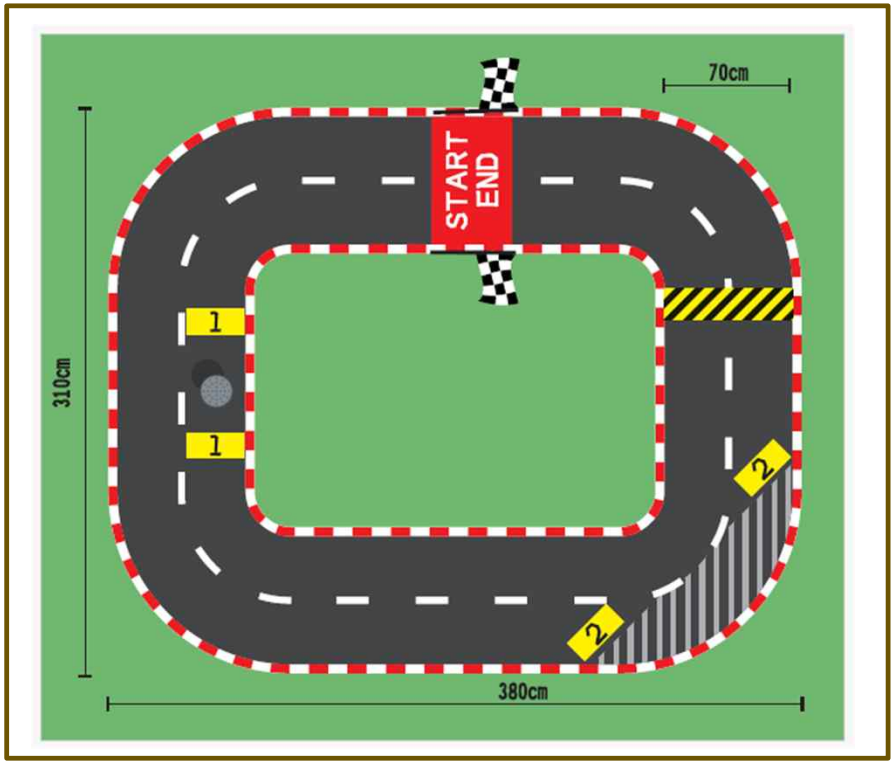
AUTONOMOUS PUSH-PUSH GAME RULES

Rules Clarification

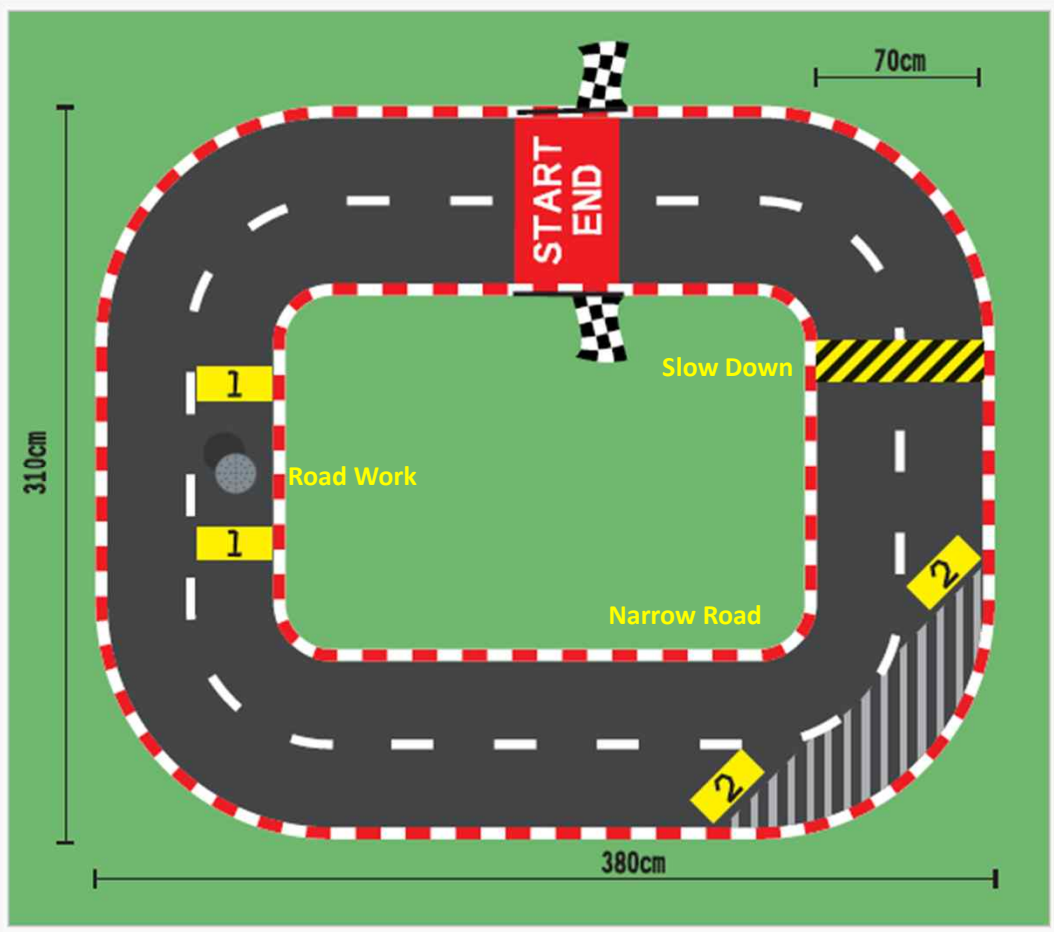
- The referee's decision is considered as final during game play and objections to the referee's judgement will not be entertained.
- Mentors must not be involved in any rules discussion for the game play.
- Video evidence will not be accepted.
- Once the Head Referee and the game referees have made a decision, no further discussions will be entertained.

JUNIOR : AI F1 RACING CAR

Age	8-13
Category	Individual
Robot Kits Allowed	MRT NODE/MRT AI KIT
Mission	Gesture control robot to race
Robot Building	Pre-build robot



AI F1 RACING CAR GAME FIELD



AI F1 RACING CAR GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- Maximum 4 DC motors and 1 mainboard.
- Participant has to bring their own laptop computer.

Game Duration

- Maximum 3 minutes.
- Game may end before 3 minutes when :
  - Completion of 2 laps
  - Disqualification of a participant
  - When referee judges that the continuation of the match is impossible

Scoring

- Time recorded for 2 racing laps or final location of the robots after end of 3 minutes game.

AI F1 CAR RACING GAME RULES

Game Play Details

- Each participant has to have their own racing robot and computer.
- The racing robot should stay in the START/END red box.
- Once whistle, the robot must move by using Pose Detection (AI), Hand Detection (AI) or Face Detection (AI)
- Participant has to complete 2 racing laps as fast as possible.
- Time recorded based on the 2nd laps when the robot touched the Start/End red box.
- If unable to finish 2 laps in 3 minutes time, then final location will be recorded. Example : robot passed obstacle 1 (road work) and not 2(narrow road), final location will be recorded as 1.

Win/Lose Criteria

- Shortest time recorded for 2 laps will be the winner.
- If the time recorded is the same, then the younger participant will be the winner.

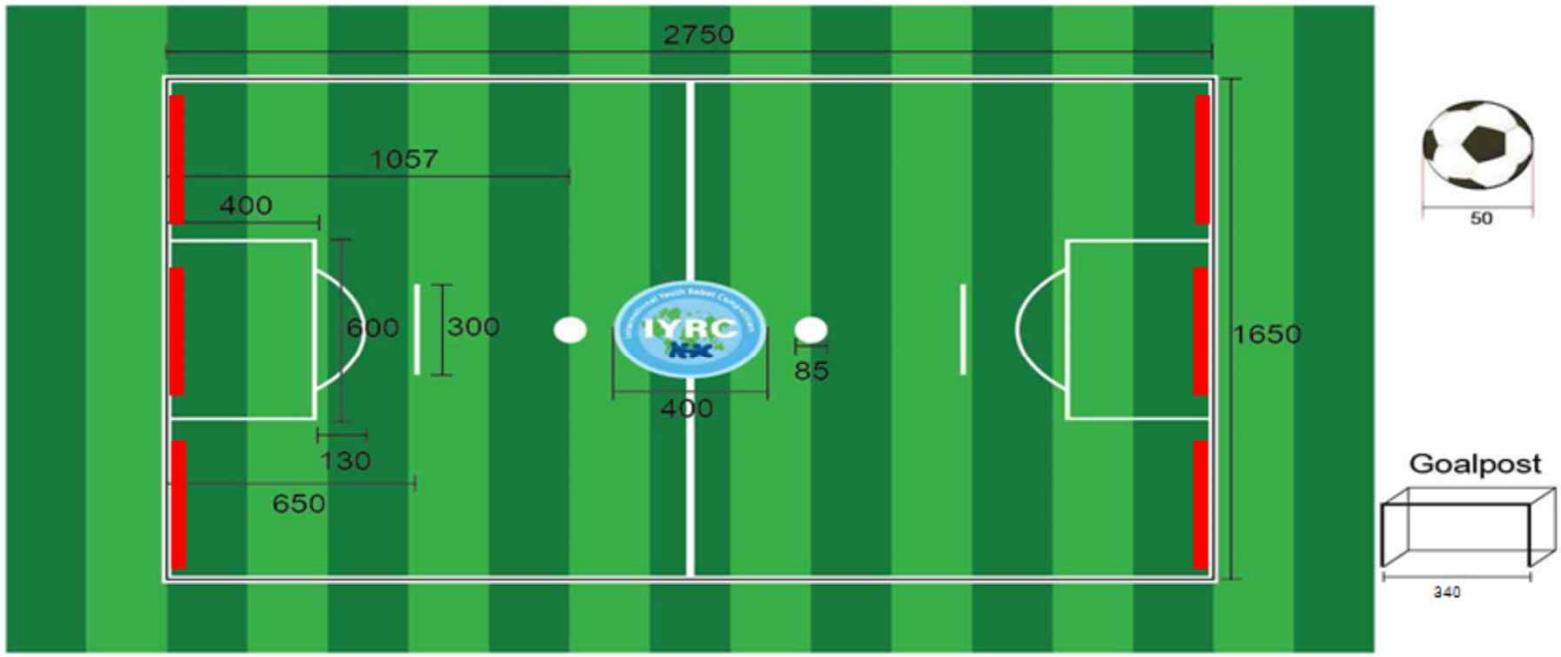
AI F1 CAR RACING SCORE EXAMPLE

Child	Lap 1	Lap 2	Final Location	Time Recorded(sec)	Rank
A (9yo)	✓	X	2	-	3
B (7yo)	✓	✓	-	120	2
C	✓	✓	-	110	1
D	✓	X	1	-	4

JUNIOR : AI ROBOT SOCCER

Age	**8-13**
Category	Team of 3 (Tournament)
Robot Kits Allowed	MRT NODE/MRT AI KIT
Mission	Gesture controlled robot to play soccer game
Robot Building	Pre-build soccer robot

AI ROBOT SOCCER GAME FIELD



measure : mm

Starting position for each team

AI ROBOT SOCCER GAME RULES

Dimensions and Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- Maximum up to 2 DC motors are allowed.
- Robot cannot be designed with a closed structure to handle the ball. The judge will check the robot structure before the competition starts.
- Participants have to bring their own laptop computer.

Game Duration

- Each game is stipulated for 3 minutes.
- Each match is stipulated for 2 rounds with each round's duration for a maximum of 1.5 minute. After the end of each round the players are to switch to the opposite side of the game field. (Only apply to Semi-final and Final game)
- Extension of rounds is only when both sides have the same score. The extension round would be for a maximum of 1 minute. At the event of the same score after the extension round penalty shoot out will commence until a winner is found.

Starting Position

- Each team will place their robot's in front of starting position as indicated in Soccer Game Field diagram before the match/round begins.

AI ROBOT SOCCER GAME RULES

Game Play Details

- Team roles :
  - 1 Defender (Remote control) & 2 Strikers (Gesture controlled)
- Defender (Remote Control)
  - cannot leave own area (own half of the field), therefore cannot enter opponents area.
  - allowed to enter own penalty area with non-stop movement to protect the goal, but is **Not Allowed** more than 10 continuous seconds inside the penalty area or being stationary (not moving) inside penalty area.
- Striker (Gesture controlled)
  - Allowed to use Pose Detection (AI), Hand Detection (AI) or Face Detection (AI)
  - Allowed to enter both own and opponent's area
  - Allowed to enter opponent's penalty area to score goal, but not more than 10 continuous seconds inside opponent's penalty area.
  - Not allowed to enter own penalty area.

AI ROBOT SOCCER GAME RULES

Game Play Details

- Fouls:
  - Any offender will be issued a yellow card. Upon receiving 2 yellow cards within a match, the player will be removed from play for 1 minute. After 1 minute the offender can re-enter the game field upon referee's approval. If an offender receives it's 4th yellow card within a match they are removed from play for the rest of the match.
  - When a goal is scored but at the same time or immediately before a foul is made by the same team who scored the goal, the goal would not be valid. (eg: when defender enters opponent's area when goal is scored)
- Type of fouls:
  - A robot that purposely block the ball against the side of the field and does not move.
  - A Defender that enters the opponent area
  - A Striker that enters own penalty area
  - A Defender or Striker that stays inside the penalty area for more than 10 continuous seconds
  - A Defender that purposely not moving in own penalty area to block the goal post
  - A participant who ignores the instruction of the referee
- Dead Ball:
  - When the ball is held by a robot and not able to move (stalemate) for more than 5 seconds.
  - Referee will blow the whistle and all robots must stop. Referee will place the ball accordingly to the situation and the game will resume with referee's instruction.
  - If this happens more than 3 consecutive times, the ball will be placed at the middle and all robots are to return to their starting position.

AI ROBOT SOCCER GAME RULES

Game Play Details

- Penalty shoot-out in the event of a draw (only apply to defender robot):
  - Ball will be placed on the white dot.
  - Defender Robot should start its movement in the mid field circle to hit/push the ball into the goal without any part of the robot's body crossing the white line.
  - 3 attempts will be given for each team to score as many goals possible.
  - If both teams has the same score after the 3 attempts a Sudden Death will occur.
- Sudden Death:
  - Each team will send 1 representative for the sudden death round. The representative has 1 chance for a penalty shoot-out. If one team manages to score while the other did not, the scoring team will be the winner. In the event that both teams scores or misses a 1v1 match will begin.
  - The first team to score in the 1v1 match will be the winner.

Scoring

- Each goal is 1 point awarded to the scoring team.
- A goal occurs when the ball is being pushed/hit/rolled into the goal post passing the line.

Win/Lose Criteria

- The team with the most goals wins.

SENIOR CATEGORY

Save the Forest

Robot Volleyball

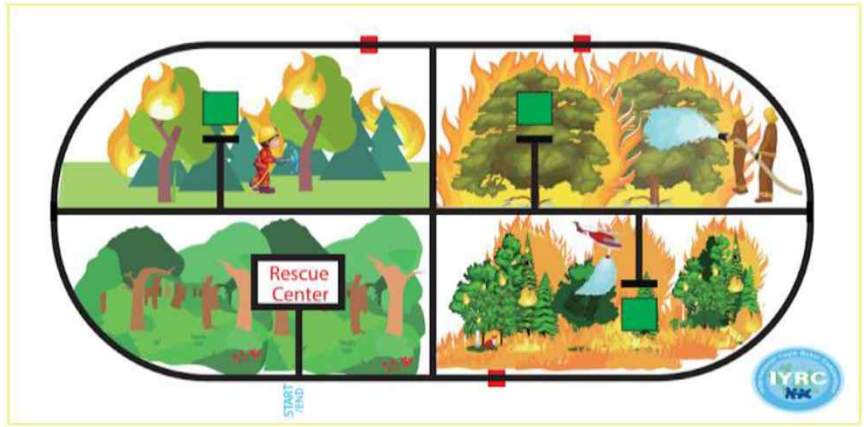
Autonomous Push-Push

[AI] AI Park Golf Challenge

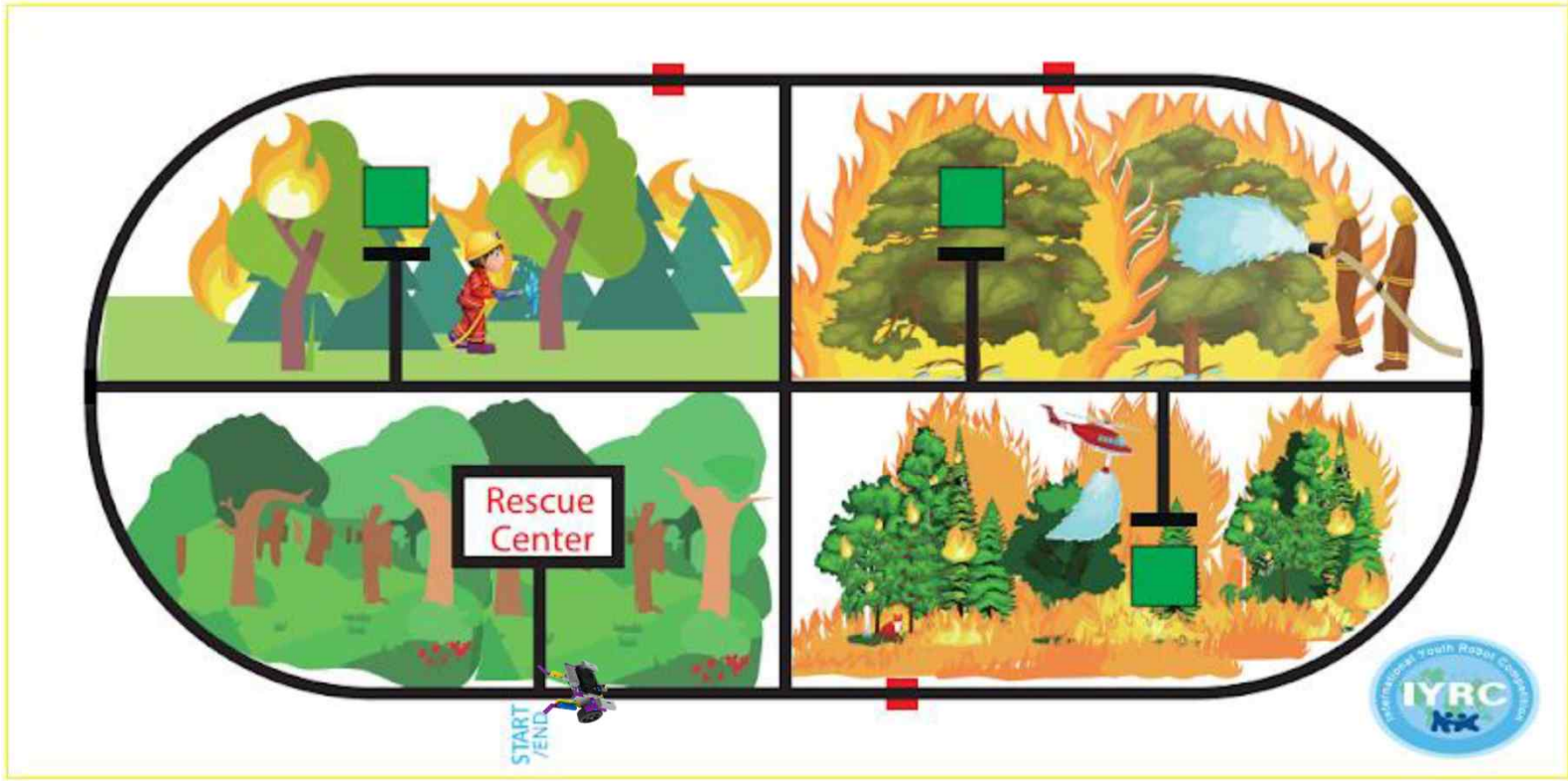
[AI] AI Coding Team Mission

SENIOR : SAVE THE FOREST

Age	**13-18**
Category	Individual Timed Mission
Robot Kits Allowed	MRT Series
Mission	Robot runs automatically to trace the black line to complete missions
Robot Building	Pre-build & on-site programming



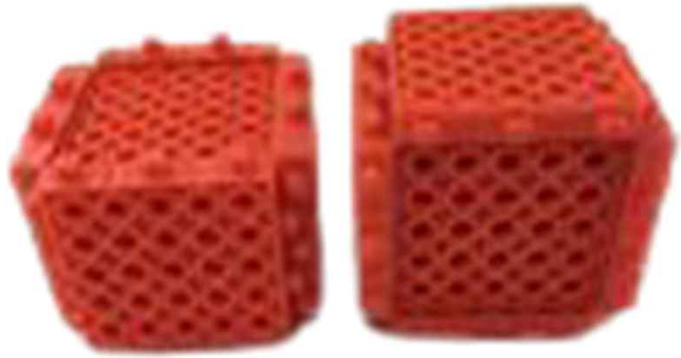
SAVE THE FOREST GAME FIELD



Note: Maze wall height is 12cm

SURVIVORS

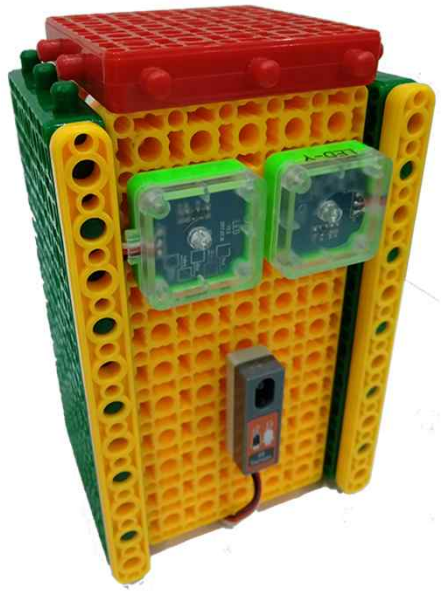
Survivor to be placed on red spots and need to carry by robot to the rescue center.



PUT OUT FIRE TRIGGER

Height of IR sensor from ground : 5.5 cm

Place on green spots. Initially Red LED on, after triggered, Green LED will be turned on.



SAVE THE FOREST GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are Not allowed to expand to any size after the game starts.
- Maximum 4 DC motors, 5 IR sensors, 2 servo motors, 1 tracer sensor block and 1 mainboard.

Game Duration

- Each participant is given a maximum of 3 hours to perform the coding and testing of the robot
- Each match is stipulated for 2 rounds with a total duration for a maximum 3 minutes.
- Game may end before 3 minutes when :
    - Completion of 2 rounds
    - Disqualification of a participant
    - When referee judges that the continuation of the match is impossible

SAVE THE FOREST GAME RULES

Quarantine

- During the 3 hours given to perform the coding and testing, all participants are quarantine for said period of time.
- Participants are allowed to do testing and modify the robot during the 3 hours given.
- Once participant is satisfied with the performance of the robot, they may hand over the robot to the referee before the 3 hours is up.
- No more programming or modification is allowed once the 3 hours is up or if the participant hands over the robot to the referee earlier.
- Participants would then wait for their turn to be called for the match.

Game Play Details

- Robot should stay behind the starting line (distance from starting line to the Robot IR sensors not exceed 5cm) and facing west (R&R map position as the reference). Timer starts when the robot's IR sensors cross the starting line.
- Whistle will be blown as a sign of start of the match.
- Participant is allowed to start (switch on) the robot using single switch operation.

SAVE THE FOREST GAME RULES

Scoring

- Carry all 3 survivors to the rescue center – fully inside the rescue center box. (Each survivor 10 points)
- Put out fire means Green LED on. (Each 10 points)
- Stop at the Start/End line at the end of the game play. (20 points)

Disqualify

- Participant touch the robot or items on the game field during the game play.
- Stalemate of more than 5 sec.
- Not tracing the line for more than 5 sec.

Win/Lose Criteria

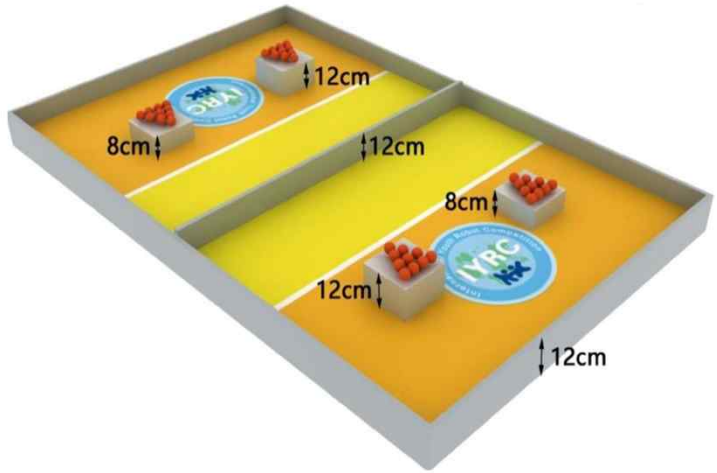
- Highest score of the two attempts will be used for ranking of winners.
- Participant with the highest score is the winner. If there are two or more participants with the same score, the lowest time recorded to finish the mission is the winner.
- If the points and time of both participants are the same, the participant who is younger would be the winner.

SAVE THE FOREST SCORE EXAMPLE

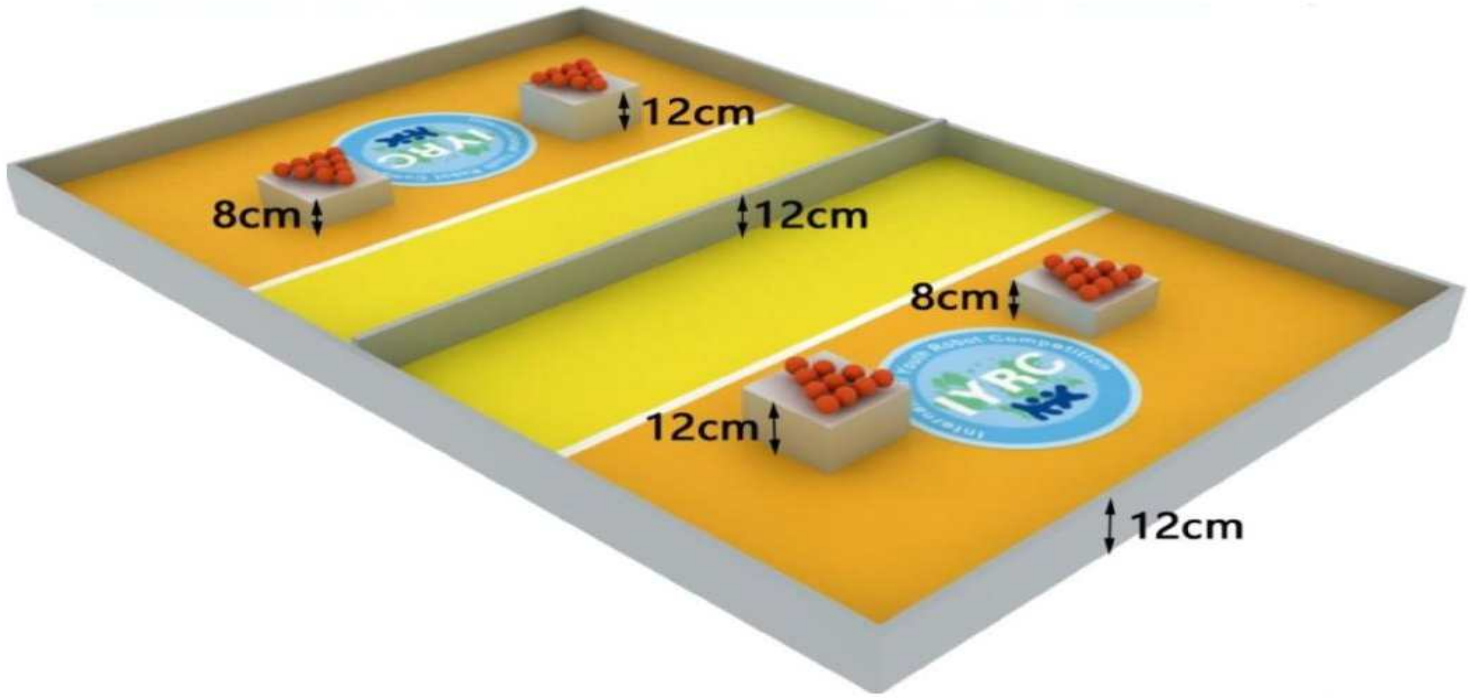
Child	Survivor rescued	Put out fire	Stop at Start/End line	Total Points	Time Taken	Rank
A (15yo)	30	20	20	70	160	2
B (13yo)	30	20	20	70	160	1
C	20	20	20	60	170	3
D	20	10	20	50	140	4

SENIOR : ROBOT VOLLEYBALL

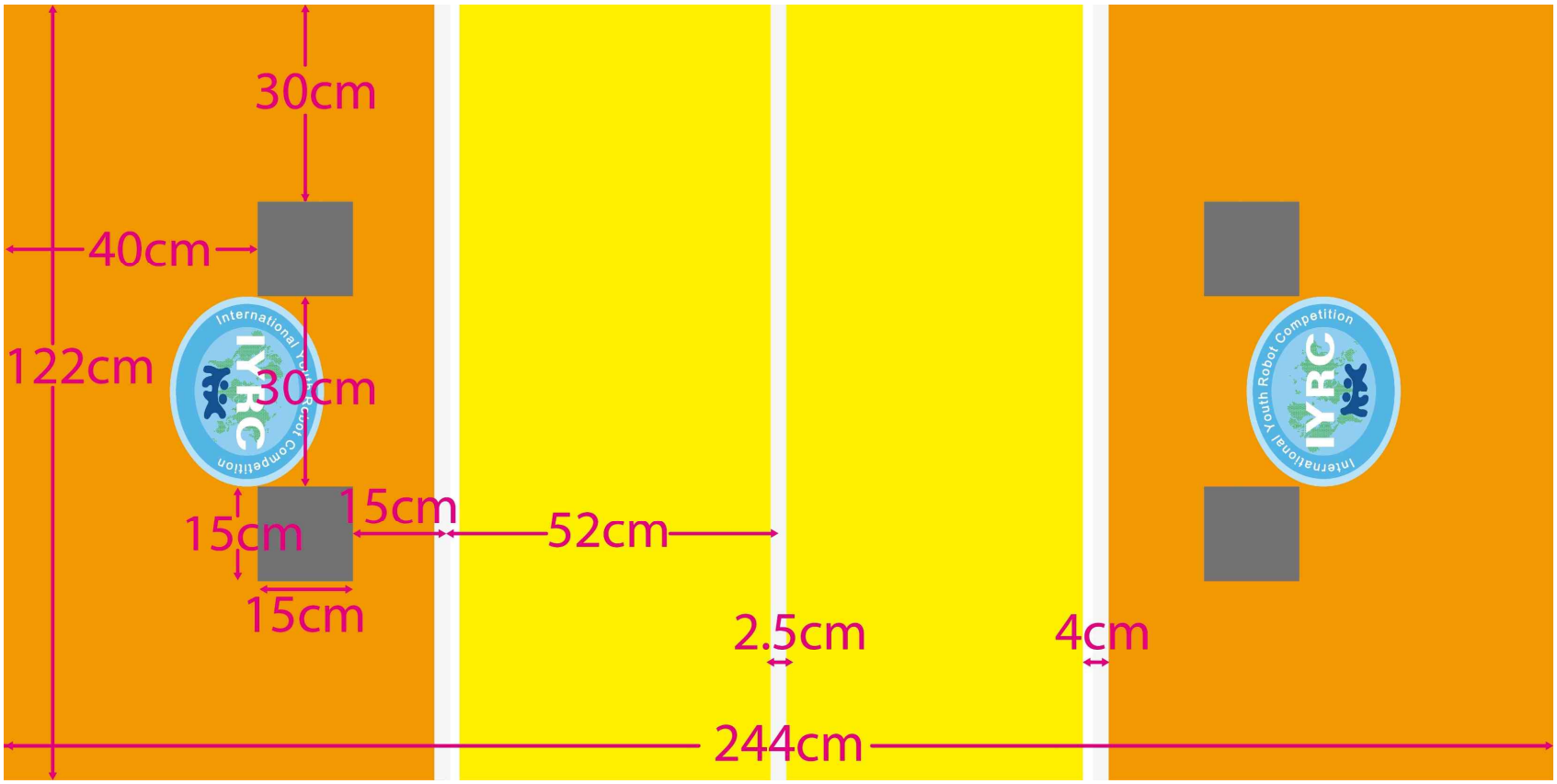
Age	**13-18**
Category	2 vs 2 Tournament
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Remote control robot to transfer table tennis balls into opponent's field
Robot Building	Pre-build remote control robot



ROBOT VOLLEYBALL GAME FIELD



ROBOT VOLLEYBALL GAME FIELD



ROBOT VOLLEYBALL GAME RULES

Dimensions and Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L). However, robots are allowed to expand to any size after the game starts
- Maximum up to 2 DC motors, 2 servo motors and 1 mainboard are allowed

Game Duration

- Each match is stipulated for 1 round with a duration for a maximum of 3 minutes.
- Extension of rounds is only when both sides have the same score. Each round extension would be for a maximum of 30 seconds and 1 robot from each team will be chosen to compete in the current state of the game field to determine the final winning team.
- Game may end before 3 minutes when :
    - One team manages to throw all balls into opponent field
    - Disqualification of both participants from the same team

ROBOT VOLLEYBALL GAME RULES

Game Play Details

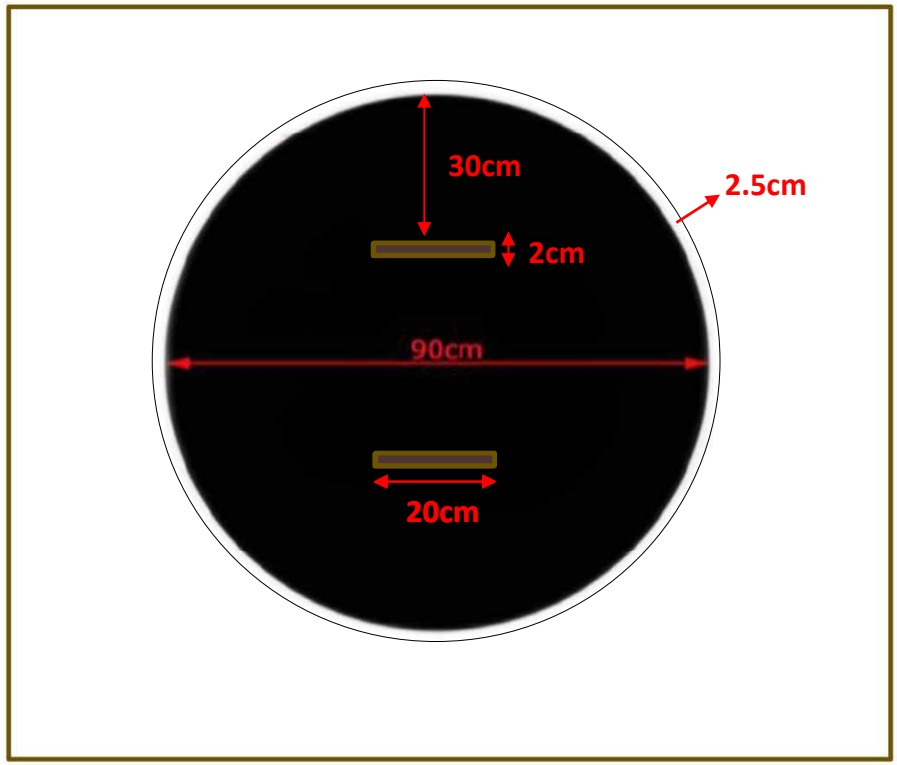
- Each team will have 20 table tennis balls placed on top of two different height towers in their own field.
- Each team can deploy any tactics or manoeuvres to grab or collect the table tennis balls from the tower and transfer them into the opponents' field.
- If the table tennis ball is thrown outside the field, the ball will be put back to the side where the ball was thrown out from by the referee.

Win/Lose Criteria

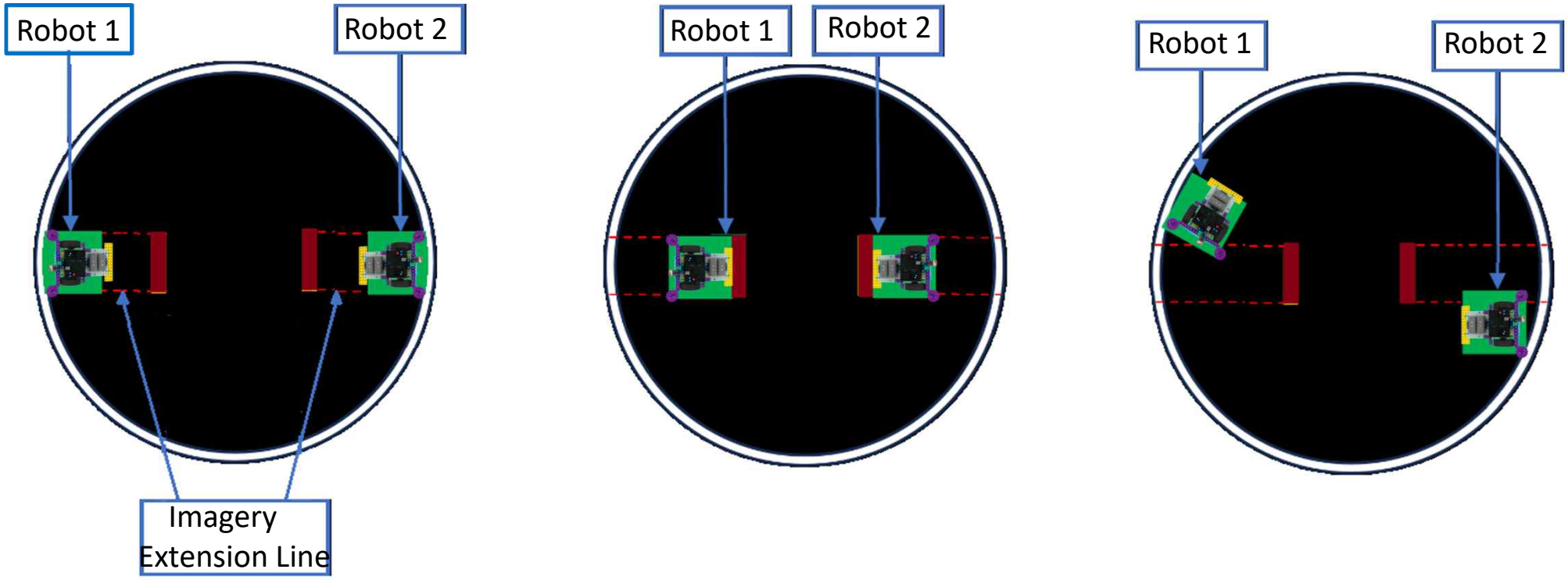
- Draw : Both sides have equal number of balls thrown to the other side.
- Win : Team which has the most number of tennis balls thrown to the opponent's side or have successfully thrown all tennis balls over to the opponent's side before the time ends.
- Lose : Team which has the least number of tennis balls thrown to the opponent's side or have all team members removed from play due to foul or disqualification.

SENIOR : AUTONOMOUS PUSH PUSH

Age	**13-18**
Category	1 vs 1 Tournament
Robot Kits Allowed	MRT Series educational robot kit (Exclude Kicky and Brain kit)
Mission	Autonomous robot to push opponent out of the ring
Robot Building	Pre-build autonomous robot



AUTONOMOUS PUSH-PUSH ROBOT PLACEMENT



Robots are allow to place in any position on the game field as long as the wheel is in the imagery extension line.

AUTONOMOUS PUSH-PUSH GAME RULES

Dimensions, Weight and Restrictions

- The robot must adhere to a maximum size of 20cm (H) x 20cm (W) x 20cm (L) and may not exceed these dimensions at any point after the game has commenced.
- The robot's maximum weight, including batteries, must not exceed 1 kg.
- The robot is permitted a maximum of 4 DC motors, 3 touch sensors, 3 IR sensors, 2 servo motors, 1 ultrasonic sensor, and 1 mainboard.
- The robot can be programmed with a maximum of three strategies, each activated separately by the touch sensors. During each round, only one strategy can be activated, initiated by pressing one of the touch sensors.
- No modifications to the parts are allowed, including bending, sharpening, or altering their shape. All components must remain in their original form.

Game Duration

- Each match consists of 3 rounds, with a maximum duration of 1 minute per round.

Scoring

- Draw: If both robots are still moving and remain within the play field, each robot will be awarded 1 mark.
- Draw: If both robots fall off the play field at the same time, neither robot will receive any marks.
- Win: A robot wins if it pushes at least half of the opponent's robot out of the play field or if the opponent's robot is unable to return to the play field. The winner receives 2 marks, while the loser receives 0 marks.

AUTONOMOUS PUSH-PUSH GAME RULES

Game Play Details

- First whistle
  - Both participants place the robot at the same time on the game field according to the placement criteria specified for the selected strategy, ensuring compliance with the permitted placement guidelines. Not allow to change the robot’s position after the placement done.
- Second whistle
  - Press the touch sensor / turn on the robot to activate the selected strategy. Once activated, participants must step back and maintain a distance of at least one foot from the game field. The robot will then begin engaging the opponent autonomously, attempting to push opponent off the game field.

Win/Lose Criteria

- The robot that pushes the opponent's robot off the playfield within 1 minute will be declared the winner of the round. If both robots fall off the playfield simultaneously, the round will result in a draw.
- If more than half of the robot's body is pushed outside the playfield (as determined by the referee), or if the robot is unable to return to the ring, it will be considered a loss for the round.
- In the event of a draw after 3 rounds, the participant with the lighter robot will be considered the winner.

AUTONOMOUS PUSH-PUSH GAME RULES

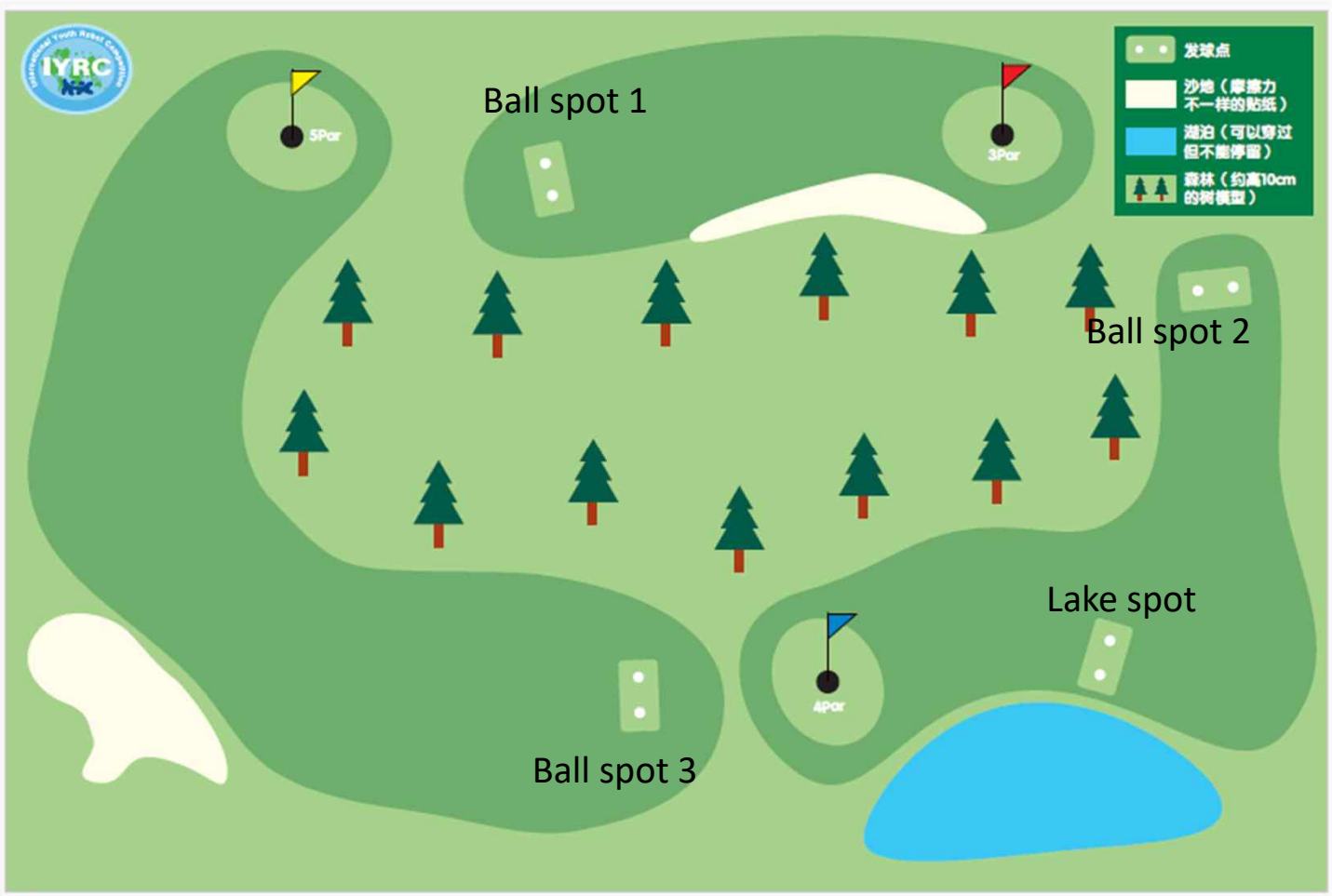
Rules Clarification

- The referee's decision is considered as final during game play and objections to the referee's judgement will not be entertained.
- Mentors must not be involved in any rules discussion for the game play.
- Video evidence will not be accepted.
- Once the Head Referee and the game referees have made a decision, no further discussions will be entertained.

SENIOR : AI PARK GOLF CHALLENGE

Age	**13-18**
Category	2 participants per team
Robot Kits Allowed	MRT NODE & MRT AI KIT
Mission	Using AI gesture control to play golf
Robot Building	Pre-build AI gesture control robot

AI PARK GOLF CHALLENGE GAME FIELD



发球点 Ball start location

沙地（摩擦力不一样的贴纸）

Sand : Use different sticker

湖泊（可以穿过但不能停留）

Lake : Ball is not allow to stay on it.

森林（约高10cm的树模型）

Tree : About 10 cm height as obstacle.

AI PARK GOLF CHALLENGE GAME RULES

Dimensions, Weight and Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L).
- Robots are allowed to expand to any size after the game starts
- Robots are Strictly NOT ALLOWED to have any foreign parts (including black tape or scotch tapes) other than the parts in MRT NODE and MRT AI kit except Rubber bands and strings are allowed to use.
- Robots are not allowed to have any power supply above 6V DC (Volt of Direct Current).
- Only allowed to use maximum 2 DC motors , 2 Servo motors and 1 mainboard.
- Participant has to bring their own laptop computer.
- Participants shall only hit the ball by swing motion and not push/hold and shoot.

AI PARK GOLF CHALLENGE GAME RULES

Game Play Details

- There are three colored holes on the field—red, blue, and yellow. Participants must hit the balls into the holes that match their corresponding colors. Ball starts at spot 1 and must be hit into the red hole. Follow by spot 2 and hit into the blue hole. Lastly at spot 3 and hit into the yellow hole.
- Once the competition starts, participants follow a sequence of [Move] → [Strike] → [Move] → [Strike], and so on. They are permitted to move or reposition their robot to the ball's spot, but they must not touch the ball or interfere with any equipment during the process. Violations will lead to point deductions.
- Each team consists of two participants, with one responsible for [Move]—bring the robot to the respective ball spot for striking—and the other for [Strike]—using AI gesture control to execute the strike. They are allowed to switch roles during the competition but must do so at least once. At no time are participants permitted to step onto the game field.
- Each team has 6 minutes to complete the competition. The game begins with the participants [Moving] the robot to any starting point and confirming it with the referee. Once the referee confirms, they will blow the whistle and start the timer. The participant can then proceed with the [Strike] task. Every subsequent [Move] will be counted within the competition time.
- If the ball is hit out of bounds, the referees will place it within an 8cm radius from where it left the field, and an additional strike will be added to the total count. If the ball lands in the lake, it will be placed at the lake spot, and an additional strike will also be added to the total strikes.
- Participants are permitted to modify the striking part of the robot to achieve different striking effects; however, the time spent changing parts will be included in the competition time.
- If time runs out and the referee blows the whistle, the score will be calculated based on the completed portion of the task.
- Once time ends, participants must cease all operations and wait until the referee has completed the score count. Any viola will lead to disqualification.

AI PARK GOLF CHALLENGE GAME RULES

Scoring

- Scores are counted based on whether the ball is in the correct hole, number of strikes and time recorded.

Rules Clarification

- The referee's decision is considered as final during game play and objections to the referee's judgement will not be entertained.
- Mentors must not be involved in any rules discussion for the game play.
- Video evidence will not be accepted.
- Once the Head Referee and the game referees have made a decision, no further discussions will be entertained.

Win/Lose Criteria

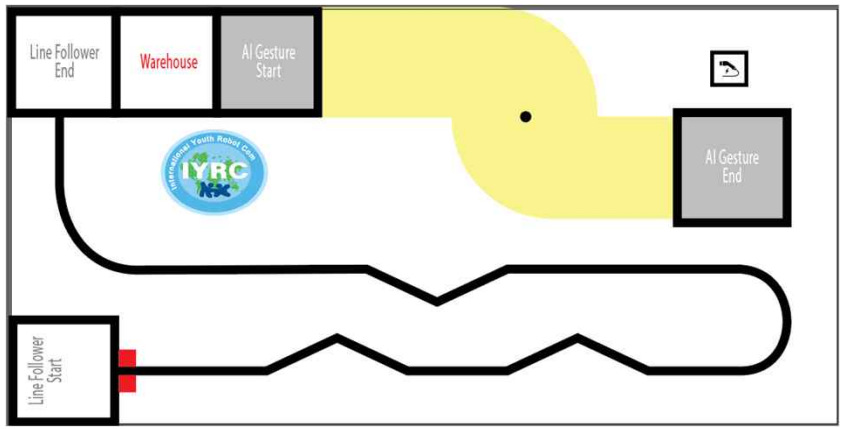
- Team with the least number of strikes will be the winner.
- If the same number of strikes occurs, the team with less time is ranked higher.
- In the case whereby all winning criterial are the same, the average age would be compared. The younger team would be the winner.

AI PARK GOLF CHALLENGE SCORING SHEET

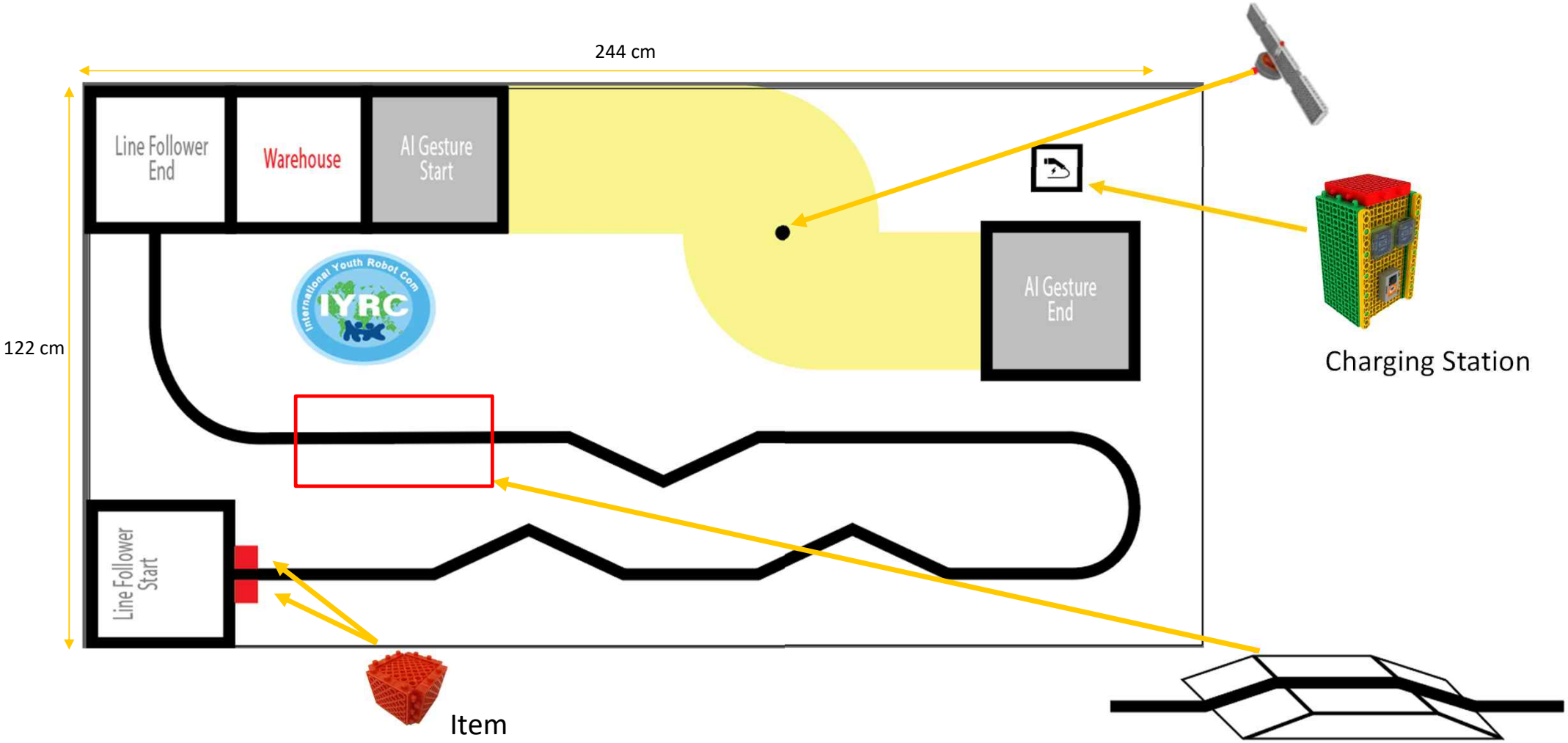
Child	Red Ball (3 Par)	Blue Ball (4 Par)	Yellow Ball (5 Par)	Out of Bound/Lnaded on lake	Total Strikes	Time (Sec)	Rank
A (15yo)	3	4	6	0	13	160	2
B (13yo)	3	4	5	1	13	160	1
C	4	5	7	0	16	170	3
D	5	6	7	0	18	140	4

SENIOR : AI CODING TEAM MISSION

Age	**13-18**
Category	Team of 2 (Tournament)
Robot Kits Allowed	MRT NODE/MRT AI KIT
Mission	AI Gesture control robot & line follower robot
Robot Building	Pre-build robot AI Gesture control robot & line follower robot



AI CODING TEAM MISSION GAME FIELD



AI CODING TEAM MISSION GAME RULES

Dimensions and Restriction

- Initial size shall not exceed 20cm (H) X 20cm (W) X 20cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- **Line Follower Robot** : Maximum 4 DC motors, 5 IR sensors/ tracer sensor, 2 servo motors and 1 mainboard.
- **AI Robot** : Maximum 4 DC motors and 1 mainboard.
- Participant has to bring their own laptop computer.

Game Duration

- 3 minutes game.
- Game may end before 3 minutes when :
    - Completion of all missions
    - Disqualification of a participant
    - When referee judges that the continuation of the match is impossible

Scoring

Line Follower Robot :

- Successfully pushes blocks into Line Following End box. (1 point each)
- Robot stops at the END Box. (2 points)

AI Robot :

- Successfully pushes blocks into Warehouse box by following the light yellow path. (1 point each)
- If whole robot get away from the light yellow path will result in point deduction.(1 point)
- Robot press the button at the Charging Station Box and stop there. (2 points)
- Time recorded will based on both robot completed the missions.

AI CODING TEAM MISSION GAME RULES

Game Play Details

- **Line Following Robot** : Once the match has begun, the robot must move and follow line by its own from the START box to complete the following task. Allow to reset the game except the timer within the game duration of 3 minutes:
  - Task 1 : Push the items from the initial location and send it to the Line Follower End box.
  - Task 2 : Stop at the Line Follower END box with any part of the robot body stays inside the box.

- **AI Gesture Robot** : Once the match has begun, the robot is allow to move from AI Gesture Start box toward the Line Following End box to collect items. Allowed to use Pose Detection (AI), Hand Detection (AI) or Face Detection (AI)
  - Task 1 : Push the items from Line Following End box into Warehouse box. Item/s that dropped half way from line follower is/are allow to collect. Item/s will place back to Line Following End box if dropped from game field during transport.
  - Task 2 : Press the button at the Charging Station and stop there.

Win/Lose Criteria

- Team completed all tasks and shortest time recorded is the winner.
- If both tasks completed and time of participants are the same, the average age of team members who is younger would be the winner.

AI CODING TEAM MISSION SCORE EXAMPLE

Child	Line Following Robot		AI Robot			Time Recorded (sec)	Total	Rank
	Block inside Line Follower End Box	Stop at Line Follower End Box	Push Block into Warehouse	Away from path	Press and stop at Charging station			
A (9yo)	1	2	1	0	0	-	4	3
B (7yo)	1	2	1	0	2	120	6	2
C	1	2	1	0	2	110	6	1
D	1	2	0	-1	2	-	4	4

COMPULSORY

Creative Robot Design (Junior + Senior)

Theme : Let’s Start Up Entrepreneurship ! AI Life With My Robots

CREATIVE ROBOT DESIGN (Compulsory)

Age	**Junior & Senior**
Category	Team 2-5 students with 1 teacher
Robot Kits Allowed	MRT Series & HUNA educational robot kit
Mission	Theme “Let’s Start Up Entrepreneurship! AI Life With My Robots ” :
Robot Building	Pre-build

CREATIVE ROBOT DESIGN

Objective

- To provide a platform for students to showcase their creativity, innovation and programming skills. They are required to work together as a team to design a robot based on the given theme. Furthermore, they need to present and demonstrate their creation well to convince and impress the judges.

Theme: Let's Start Up Entrepreneurship! AI Life With My Robots

This competition is about using robotics and AI (artificial intelligence) to build a **"startup"** (a small business idea) that makes people's lives easier, happier, or healthier. Your robot should act like a helpful friend or a smart tool that people might want to **buy** or **use daily**. Think:

•*How can my robot help someone at home, school, or in the community?*
•*What problem does it solve?*
•*How does AI make it clever?*

For example:

•A robot that sorts trash for recycling.
•A robot that waters plants when they're thirsty.
•A robot that helps kids learn math with fun games.

CREATIVE ROBOT DESIGN

Tips for Success

- **Teamwork:** Divide roles (coder, designer, presenter).
- **Test Early:** Build a small prototype first.
- **Fun First:** If you're excited, others will be too!

Key Insights to Guide Kids

1.Focus on Real Problems

- Start by asking: *"What's annoying, boring, or hard for people around me?"*
- Example: If your little sister forgets to feed the pet, design a robot feeder with AI features.

2.AI = Smart Brain for Your Robot

- AI can help your robot **learn** or **make decisions**.
- Simple AI: Teach it to recognize faces, understand voice commands, or avoid obstacles.

3.Think Like a Business Owner

- Would people pay for your robot? Why?
- Example: A robot that walks dogs for busy families might save time!

4.Keep It Simple & Doable

- Avoid overcomplicated ideas (e.g., robots that fly to Mars).

CREATIVE ROBOT DESIGN

Project Ideas to Inspire

1.Eco-Buddy Robot

- A robot that plants seeds in gardens and reminds you to water them.

2.Homework Helper

- A robot that organizes your books and sets study timers using voice commands.

3.Grandma's Companion

- A robot that fetches medicine, reminds about appointments, and plays memory games for senior citizens.

4.Lunchbox Bot

- A robot that packs healthy snacks and warns when food is about to expire.

Robot Dimensions and Weight

- The size and weight of the robot is not limited.

CREATIVE ROBOT DESIGN RULES

Restrictions on Robot design

- Only MRT series of products are to be used to build the robot. There is no limitation to the number of blocks used to build the robot. You are allowed to cross use the parts from the above-mentioned systems for the robots.
- Robots shall not damage any part of the field or obstacles deliberately.
- Robots allowed to move or make motion autonomously OR use remote control.
- Other materials can be used to further enhance the model/robot such as camera, paper cups, rings, sticks, bottles, 3D printed models, drone, future board, etc. (keeping in mind that the main component needs to be products from MRT series).
- VAC (Volt of Alternating Current) power supplies are strictly prohibited for safety reasons.
- Robots shall not cause any danger to the arena & surroundings in any way whatsoever.
- Robots will need to protect their sensors, if necessary, from any outside interference.
- Robots RC receivers will need to be protected from any outside interference.

CREATIVE ROBOT DESIGN REQUIREMENTS

Game Rules

- Participants shall build a robot in advance. However, participants are still given 2 hours to prepare their robot / model.
- Each group has a presentation time of 5 minutes to introduce their robots to the referee on the stage. Presentations can be done in English. If they are unable to present in English, they have to prepare their own translator.
- Robots may be displayed in the allocated table assigned to each group. Hence, Participants are required to ensure their models/robots are taken care off during the display time to the public until the judging is completed.
- After registration, a poster(presentation) form will be sent the teams by organizer, and participants need to fill the poster content. Besides, 4 copies of the printed Manual (Presentation File) in English is required for the display and referees review, it needs to include:
  - Robot Name
  - Purpose
  - Team member introduction and task allocation
  - Introduction of the project
  - Specification and features
  - How to program (if needed)
  - Functionality of robot

Theme: Let's Start Up Entrepreneurship! AI Life With My Robots

CREATIVE ROBOT DESIGN SCORING

Scoring

- Referees will check if the team meets the requirements or not, and evaluate teams' works. Score will be given based on different criteria and weightage respectively:
  - Relevance to theme: 10 score
  - Creativity & Uniqueness: 30 score
  - Robot Functionality: 30 score
  - Team work: 10 score
  - Presentation skill: 20 score
- Additional Points
  - Robots make motion or move autonomously. (+5 points)
- Participants submit how to code or programming code (+5 points)
- Participants use more than two types of main board from MRT products. (+5 points) (E.g. MRT3 Main board + MRT5 Main board + MRT Node + MRT AI + LSM + MRT Coconut + MRT Blacksmith + MRT Duino Main board)
- Participating group with the highest score is the winner. If there are two or more groups with the sam score, the lowest average younger participating group is the winner.

OPEN CATEGORY

Humanoid Robot Mission

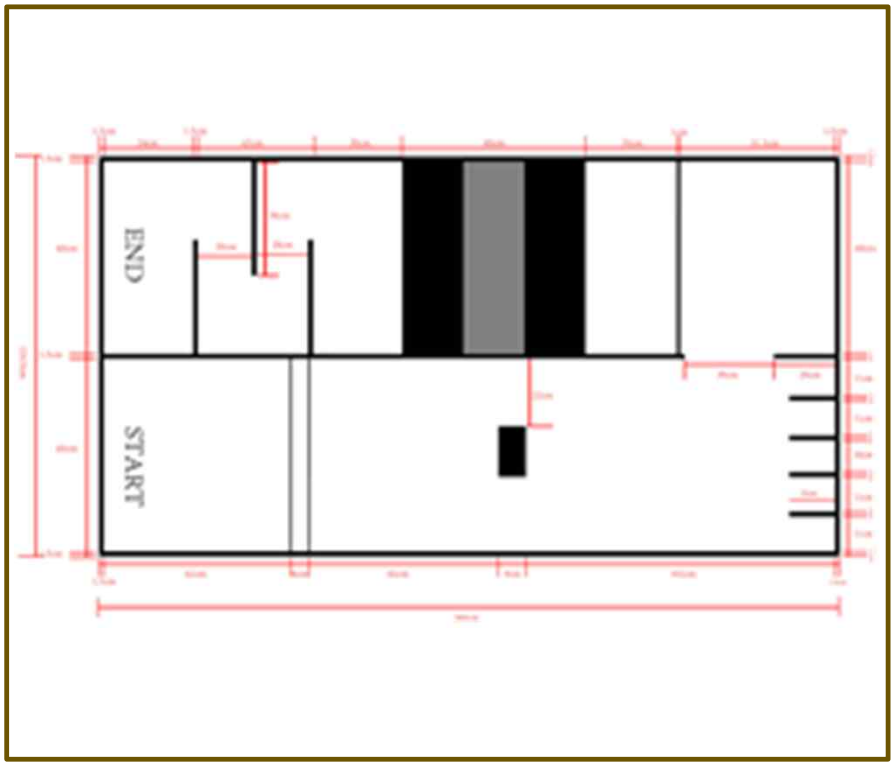
Cocomon Go

Genibot Coding Mission

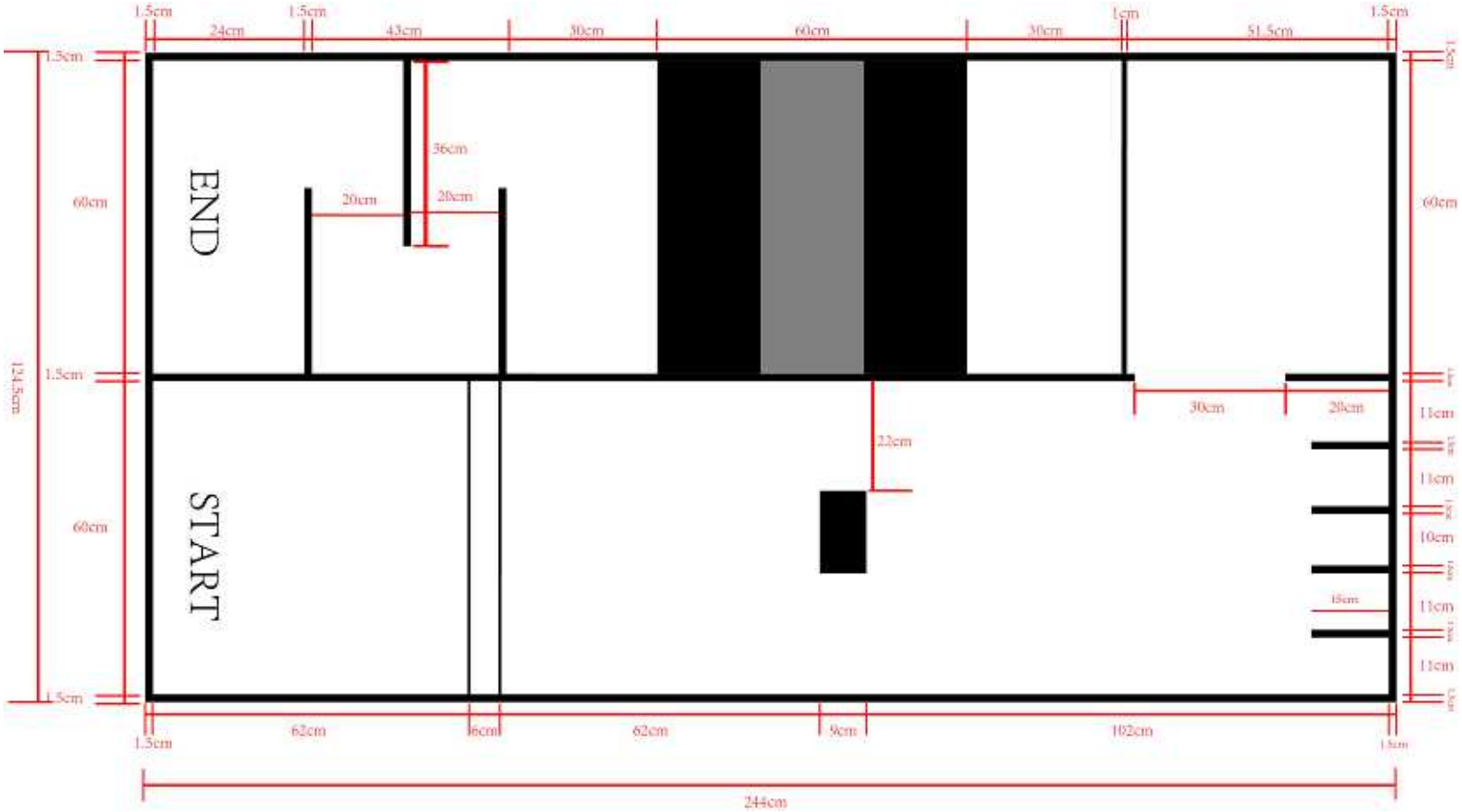
Game Maker Kit Game Design Challenge

OPEN : HUMANOID ROBOT MISSION

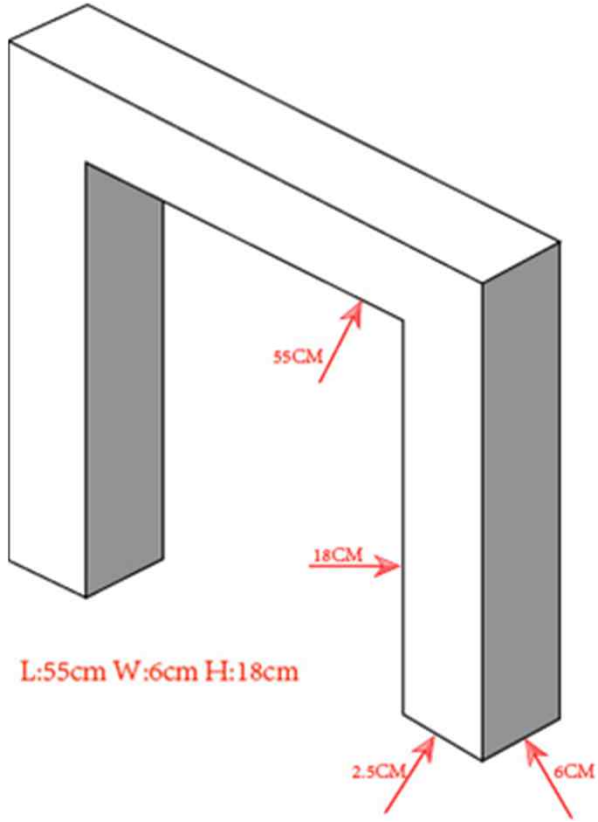
Age	All
Category	Individual Timed Mission
Robot Kits Allowed	MRT LINE Core Humanoid
Mission	Control the humanoid to complete missions
Robot Building	Pre-programmed LINE Core Humanoid



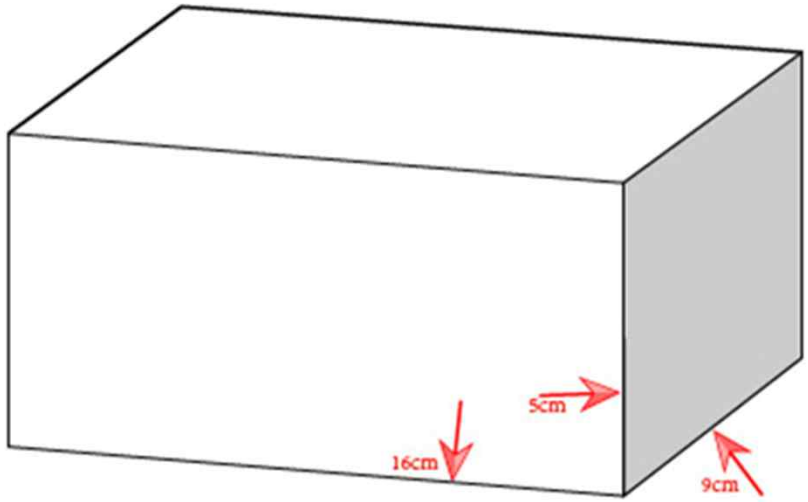
HUMANOID ROBOT MISSION GAME FIELD



MISSION 1

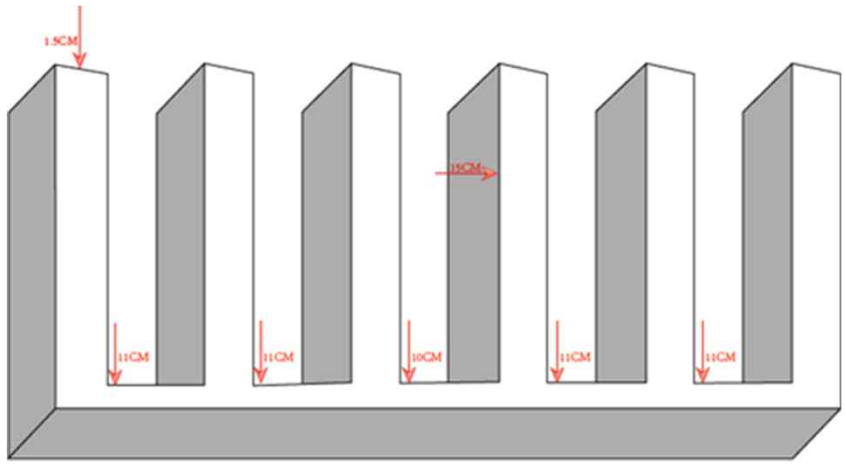


MISSION 2

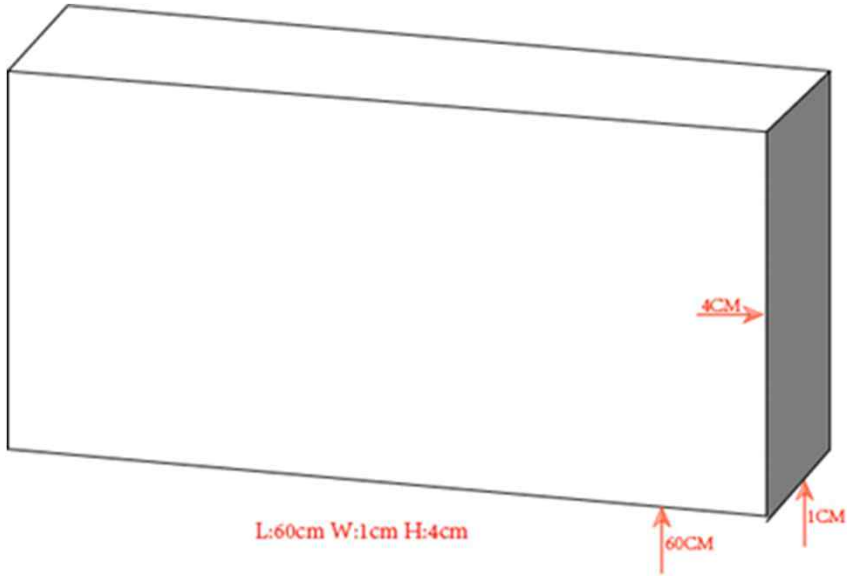


Rectangle: L:16cm W:9cm H:5cm

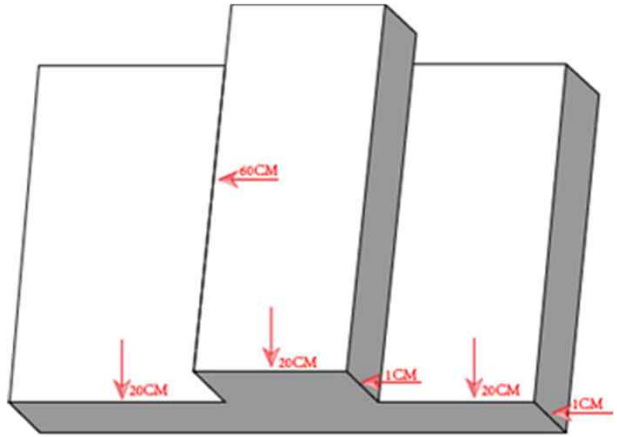
MISSION 3

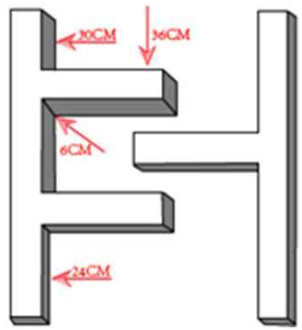


MISSION 4



MISSION 5





HUMANOID ROBOT MISSION GAME RULES

Dimensions and Restrictions

- Only MRT LINE Core Humanoid and its parts are allowed to use.
- The battery specification, length of robot leg and arm should strictly adhere to the instruction manual (LINE Core Humanoid).

Game Duration

- Each match is stipulated for 1 round with a duration for a maximum of 5 minutes.

- Game may end before 5 minutes when :
  - Robot reached the end line.
  - Disqualification of a participant
  - When referee judges that the continuation of the match is impossible

HUMANOID ROBOT MISSION GAME RULES

Game Play Details

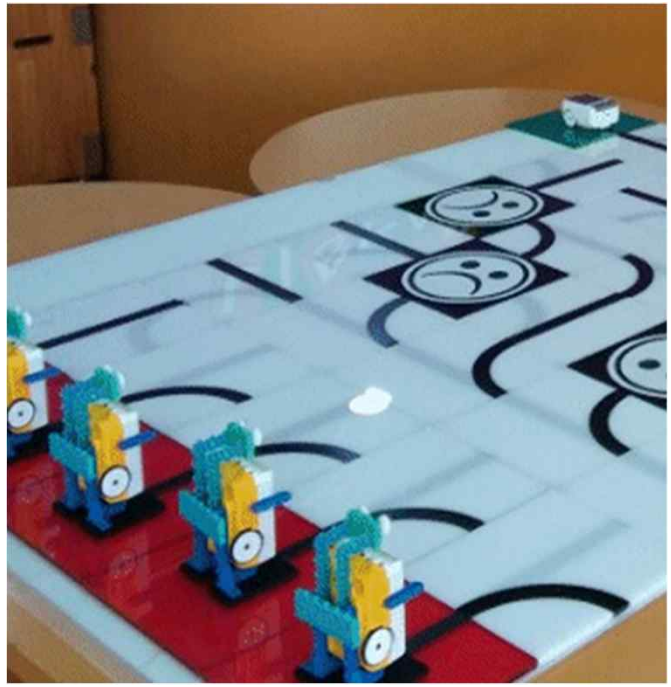
- Participant should prepare their own Android device (Airplane Mode) to control the robot.
- Robot can start to move once the whistle blown.
- During the game, if robot out of battery and not be able to control anymore, game will be terminated and current point will be recorded.
- Each mission has 2 tries. The second try, referee will place the robot at the starting point of the mission / the point gap of the mission.
- If both failed, then referee will move it to the next mission starting point / next point gap.
-

Win/Lose Criteria

- Participant with the highest score is the winner. If there are two or more participants with the same score, the lowest time recorded to finish the missions is the winner.
- If the points and time of both participants are the same, the participant who is younger would be the winner.

OPEN : COCOMON GO

Age	**8-13**
Category	2 members a team
Robot Kits Allowed	COCONUT
Mission	A simple mission to create a round line using the dot matrix function and line tracer function of MRT Coconut solves the problem of improving algorithmized computing thinking ability to obtain scores and final arrival scores using different puzzle boards
Robot Building	Pre-build robot



COCOMON GO GAME FIELD

Objective

- MRT Coconut's dot-matrix function and line tracer function, which are integrated physical computing with Ar duino-based hardware, are used to perform a simple mission to create a round line while passing through diffe rent puzzle boards in a set time, and the score of the dot-matrix of Cocomon at the final point of arrival is adde d to achieve higher scores

Restriction on Robot Design

- MRT Coconut with scratch and entry, Python-coding Arduino-based hardware, and MRT Coconut with line tra cer made using MRT blocks run.
- It should start from the starting point (green puzzle board) (starting is irrelevant in either direction)
- The starting coconut takes five seconds to move one compartment of the puzzle board.

※ The starting coconut is prepared by the organizers of the competition.

- Scores Cocomon are 5 units in total, each located on a red puzzle board.
- Scores Cocomon each marks the score with a tote matrix, consisting of 5 points (1 unit), 10 points (3 units), and 15 points (1 unit)
- Score Cocomon can be checked by turning on the score Cocomon on the puzzle board that arrived when the departing coconut arrived at the point of arrival (red puzzle board).

COCOMON GO GAME FIELD

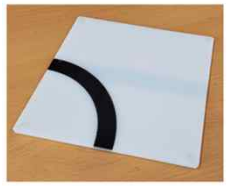
Obstacle Puzzle Edition

- Obstacle puzzle plates are given four, which interfere with the driving of the starting coconut.
- The position of the obstacle puzzle board is determined by random drawing before the start of the game.
- The size of the obstacle puzzle board is 19.5 cm wide and 19.5 cm long, and it is black.

Road puzzle board

- The road puzzle board is marked with a black line to create a line for the starting coconut to drive
- The size of the road puzzle board is 19.5cm wide and 19.5cm long.

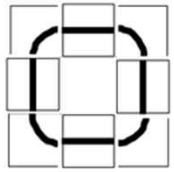
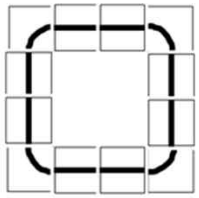
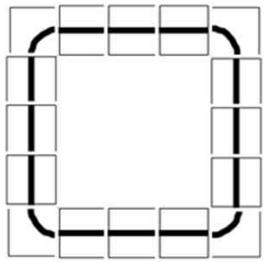
As shown in the figure, the road puzzle board has black lines in front and back consisting of straight lines and curves, so you can flip and make a different path.



COCOMON GO GAME RULES

Game Rules

- The race time is 5 minutes, and within 5 minutes the departing coconut must depart and arrive at the point of arrival.
- If the arrival point is not reached within the game time, the team's score will be determined only by the mission performance score up to the point after 5 minutes.
- Prior to the start of the game, the position of the five Cocomon players and the position of the four obstacle puzzle boards are determined by random drawing by the team.
- The following is how to obtain a mission score while traveling to the point of arrival.
- The road puzzle board flips back and forth to create a road and the starting coconut can drive.
- The obstacle puzzle board is immovable.
- Check the location of the obstacle puzzle board and earn a mission score when the coconut drives along the path below.

 2×2	 3×3	 4×4	 5×5
4 point	10 point	16 point	22 point

COCOMON GO GAME RULES

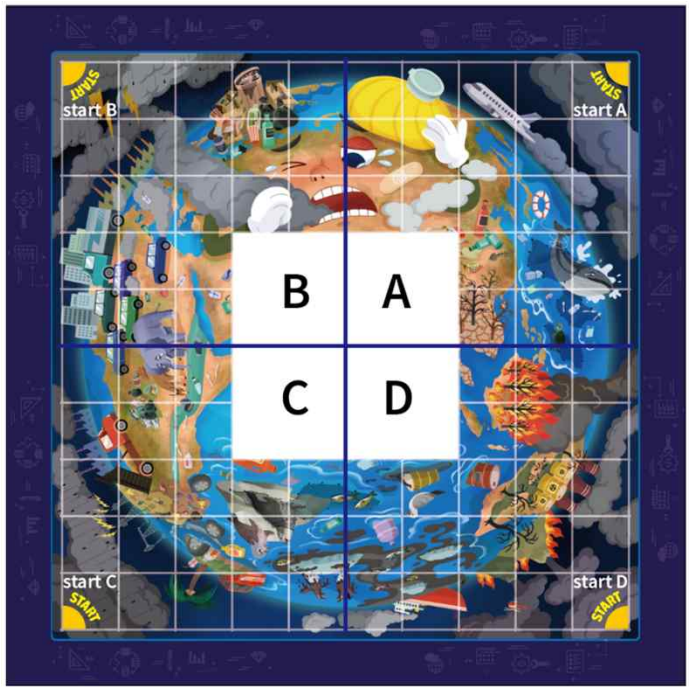
- You make a round road with a starting coconut and drive to score points, and even if you drive the same road again, the same road is not recognized as a score.
- If you want to make a round road with a starting coconut to earn points, and if you want to get points again, you must make a round road made of another route into a road puzzle board to earn points.
- All scores obtained by creating a round road while driving are summed up to become mission scores obtaine d by the team.
- If you arrive at the point of arrival within 5 minutes of the match, turn on the Cocomon on the red puzzle boar d to earn the Cocomon score.
- The final score is the sum of the total mission scores obtained during the match and the Cocomon score captu red at the point of arrival of the score.
-

Scoring

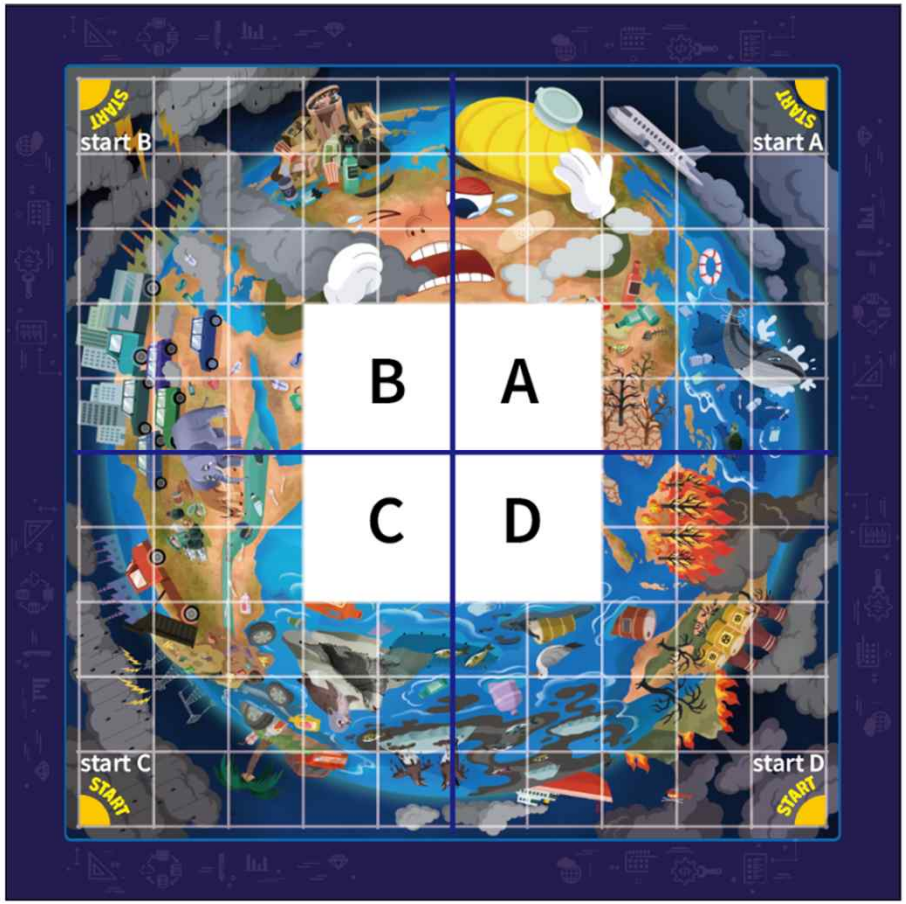
- Two points will be deducted if the referee does not comply with the order during the game.
- If you turn on the arrival Cocomon in advance and check, you will get 2 points deducted.
- Points will be deducted according to the judge's judgment when receiving external assistance.
- Equalizer Rules: If the points earned by the team are the same, the team with the highest order shall win.
- a team with a high score by making a round road
- The team with the highest score of Cocomon
- The team that has less time left to arrive at the destination in 5 minutes
- The lower team after adding the grades of 2 students from the participating team
- Participating teams in the lower grades
- The participating team is the team with the late birth date of the lower grade student

OPEN : GENIBOT CODING MISSION

Age	ALL
Category	Team of 2
Robot Kits Allowed	GENIBOT
Mission	Unplugged Coding – Waste Sorting Challenge
Robot Building	Pre-build robot



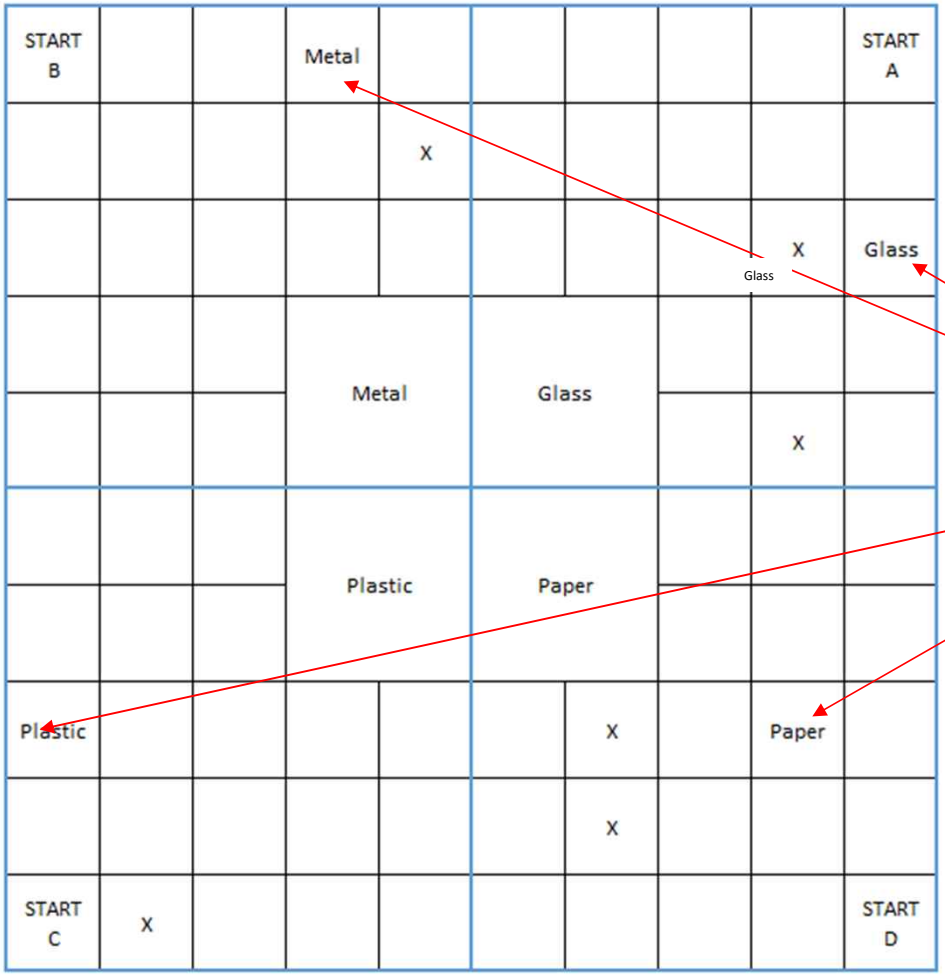
GENIBOT CODING MISSION GAME FIELD



Mission items :

A - Glass
B - Metal
C - Plastic
D - Paper

GENIBOT CODING MISSION
Mission Card Example



Destination of each mission item

X - Obstacle

GENIBOT CODING MISSION GAME RULES

Dimensions and Restrictions

- Initial size shall not exceed 25cm (H) X 25cm (W) X 25cm (L).
- Robots are NOT allowed to expand to any size after the game starts.
- Maximum up to 2 DC motors are allowed.

Game Duration

- Each game is stipulated for 3 minutes.
- Once the mission card is drawn, teams have only 5 minutes to program the Genibot.

Starting Position

- Each team places their Genibot at two of the four available starting corners depend on their program strategy.

GENIBIT CODING MISSION GAME RULES

Game Play Details

- The playing field is a grid pattern. Genibot can only move in grid units.
- There are 4 types of mission items to be collected in the playing field and send to the destination base on the mission card.
- The two Genibots start from any 2 corner of the starting position.
- Participants have to program the Genibot according to the drawn mission card, such as forward, backward, and rotate, to move objects to the destination while avoiding the obstacles.
- Participants have to pass the mission card to the referee before the game start to prepare the game items accordingly.
- When moving objects on the playing field, the two Genibots proceed separately at the same time, and the mission is completed when both Genibot moves the mission items to the correct destination.
- Game may end before 3 minutes when :
  - Both Genibots have completed the missions.
  - Referee judges that the continuation of the match is impossible

GENIBOT CODING MISSION GAME RULES

Scoring

- Time recorded for mission completion.

Win/Lose Criteria

- The team with shortest time is the winner.

GENIBOT CODING MISSION SCORE EXAMPLE

Child	Mission Completed	Time Recorded (sec)	Rank
A (9yo)	3	~	3
B	4	130	2
C	4	120	1
D (10yo)	3	~	4

OPEN : GAME MAKER KIT GAME DESIGN CHALLENGE

Age	All
Category	Team 1-3 students
Robot Kits Allowed	Game Maker Kit
Mission	Design a proper game based on the theme given and submit online.
Robot Building	Pre-build robot

GAME DESIGN CHALLENGE

Objective

Provide a platform for students to showcase their creativity, innovative and programming skills. They are required to work together as a team to design a game based on the given theme. Besides, they will also need to present and demonstrate their game creation well to convince and impress the referees.

Restrictions on Game design

- Only MRT Game Maker Kit is to be used to make game.
- Participants should make code at https://arcade.makecode.com.
- Participants should make sure that games work properly both at emulator of websites above and MRT Game Maker Kit.

GAME DESIGN CHALLENGE

Game Rules

- Participants shall make game code in advance.
- Each group has a presentation time of 3 minutes to introduce their games to the referee on the competition place. Presentations can be done in English. If they are unable to present in English, they have to prepare their own translator.
- Game kit and laptop may be displayed in the allocated table assigned to each group. Hence, Participants are required to ensure their game kit are taken care of during the display time to the public until the judging is completed.
- After registration, a poster(presentation) form will be sent the teams by organizer, and participants need to fill the poster content. Besides, 4 copies of the printed Manual (Presentation File) in English are required for the display and referees review, it needs to include:
  - Game Name
  - Purpose
  - Team member introduction and task allocation
  - Introduction of the project
  - How to program (coding block captured)
  - How to play.

Theme: My Robot, Time to Save the Earth

GAME DESIGN CHALLENGE

Scoring

- Referees will check if the team meets the requirements or not, and evaluate teams' works. Score will be given based on different criteria and weightage respectively:
  - Relevance to theme: 10 score
  - Creativity & Uniqueness: 30 score
  - Code Functionality: 30 score
  - Team work: 10 score
  - Presentation skill: 20 score
- Additional Points
- When participants create their own Character/Background, they will get additional points up to 5 ~10 points.
- When participants use more than 3 kinds of coding blocks, they will get additional points up to 5 ~10 points.

  e.g.) Loops, Logic, Music…

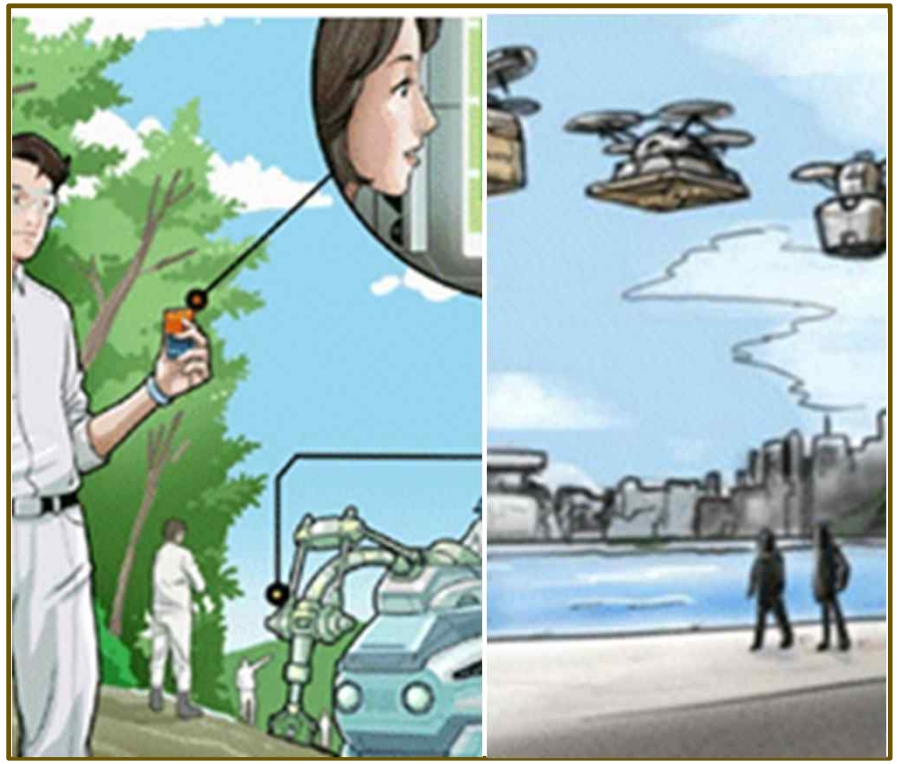
- Participating group with the highest score is the winner. If there are two or more groups with the same score, the lowest average younger participating group is the winner.

ONLINE CATEGORY

Robot Dream Design

ONLINE : ROBOT DREAM DESIGN

Age	**All**
Category	Individual
Theme	**AI Life With My Robots**
Mission	Drawing robots expressing the theme.
Robot Building	Presentation



ROBOT DREAM DESIGN

Objective

- Students are encouraged to freely imagine scenarios of living with robots in the future, where creativity, innovation, and imagination are key. They can design robots or systems based on scientific evidence and underlying technology to enhance future living. Submit a one-page A4 jpg file with a freeform introduction of the robot and its functions, along with an imaginative depiction of future living with robots.

Theme: AI Life With My Robots

Design Specification

- A4 1-page content containing explanatory text and an illustration (format can be comic, diary, drawing, diagram, etc.

ROBOT DREAM DESIGN RULES

Robot Design Rules

- Isaac Asimov's Three Laws of Robotics must not be violated.
- First Law: A robot may not injure a human being or, through inaction, allow a human being to come to harm.
- Second Law: A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law.
- Third Law: A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.
- When designing robots, they should be presented in free-form formats such as scenarios, comics, blueprints, etc., based on scientific evidence or existing technology.
- As design is involved, the submission should provide specific guidance, explanations, or colored results regarding color schemes.
- Hand-drawn illustrations are acceptable, and submissions should be in the form of a one-page A4 jpg file.

ROBOT DREAM DESIGN REQUIREMENTS

Participation Procedure

- Participants must submit a jpg file via email along with the participation application form and personal information consent form. Files should be saved with the participant's name. For example, "name.jpg". In the case of a group, submission should be made collectively in an Excel file.
- File submissions are made as a group through the responsible teacher or mentor.
- Submissions are accepted until **July 24, 2025,** to **seyu7374@naver.com**

ROBOT DREAM DESIGN SCORING

Judging Criteria

- The judges will verify whether the team meets the required conditions and evaluate the team's image file.
- Scores are composed as follows:
    1. Practical aspects based on scientific evidence or current technology (35 points)
    2. Ideas or creative problem-solving skills addressing current issues or attempting new approaches (35 points)
    3. Expressiveness of the design representing the implementable features of the robot or system (30 points)

GENERAL GAME RULES

GENERAL RULES

Common Rules

- The organizer reserves the right to disqualify any participants if found violates any rules.
- In the event of any disagreement or misunderstanding, the judges' decision will be final.
- If there are any changes to the rules and regulations, it will be announced to all participants 10 days before the competition starts. The judges will have full authority to explain and enforce the rules for all the competition category.

Participants

- Participants are allowed to participate in **Maximum 2 categories** **+** 1 Creative Design (Compulsory).

Scoring

- Each participant/team representative needs to confirm the competition result and sign immediately after the end of the match.
- Participants are not allowed to dispute the result recorded after the confirmation.
- All time are measured using a stopwatch.

GENERAL RULES

Competition Rules

- Prior to the start of the competition, all robots will undergo an inspection.
- If a robot does not meet the specifications or design restrictions, the participant will be given a grace period of 15 mins to modify their robot to meet the specification or comply with the design restriction, failure to do so within the time limit the participant will be disqualified.
- If the robots encounter any technical difficulty before the start of the match, they will be given 5 minutes to fix the robot.
- Judges can assign practice playfield and restrict practice time per participant / team to ensure equal and fair practice time.
- RF Remote Control will be provided by organizer for categories that requires a remote control robot. In this case, robot should set to Channel 1 or programmed to Channel 1(MRTX mainboard) in order for it to work.
- All robot parts are not allowed to drop while the match is in progress. Judges may take necessary action against the teams that dropped their robot parts that could affect on-going matches.
- Participants are not allowed to touch their robots and/or remote controls during the competition unless instructed by the judges.
- Sharing of robots among the participants in the competition is not allowed.

GENERAL GAME RULES

Robot Design Restrictions

- Only MRT Series, & HUNA educational robot kit are allowed (Cross using parts is allowed).
- No limitation to the amount of blocks used to build the robot as long as within size and weight restrictions.
- My Robot Time Toy series and MRT Soccer Robot are **Strictly NOT ALLOWED**.
- Electronic parts are not allowed to be modified in any way. If found guilty, the participant would be **IMMEDIATELY** disqualified.
- No modification of parts are allowed (no bending, sharpen or change shape of parts). All parts must stay in original state.

Robots

- Robots are not allowed to have any power supply above 9V DC (Volt of Direct Current). VAC (Volt of Alternating Current) power supplies are strictly prohibited for safety reasons.
- Robots will need to protect their sensors from any outside interferences if necessary.
- Robots RC receivers will need to be protected from any outside interferences.

Game Fields

- Robots shall not damage any part of the field or obstacles deliberately.
- Robots shall not cause any danger to the arena and surroundings in anyway whatsoever.

GENERAL GAME RULES

Fouls (2 Fouls = Disqualification)

- Not obeying judges' order. Disrupting order
- Communication with spectators or other participants

IMMEDIATE Disqualification

- Robot does not comply with the size/weight restrictions of the game participated
- Usage of parts that is not authorized before match
- In case of technical problem such as robots are uncontrollable, the referee will pause the match and help participants to turn off and on the robot only. If the robot still cannot function after the robot is turned back on, the participant will be disqualified.
- When the robot is not able to move not due to technical reasons for more than 10 seconds (due to fallen off parts, stuck, design flaw, etc)
- Carry storage devices including MP3 player, PMP, USB memory
- Touching or damaging other participant's robot, laptops, or belongings
- Touching the robot or the game field and it's contents while the match is in progress. (except for Bowling)

GENERAL GAME RULES

Remote Controlled Robots

- Participants who remote control the robot shall keep a certain distance away from the game field area without touching or disturbing the game.
- Any related to channel setting in programming, do program it to Channel 1 (default) as RF Remote Control will be used in the competition.

Other Rules

- **While the match is in progress, at any time the referee whistles, the human operator should stop the robot.**
- Upon removal of a robot from the playing pitch, it can only re-enter the match upon referee's approval.
- The parts which are fallen or broken from the robots cannot be fixed back onto the robots during the match.
- The referee's decision would be final and no disputes will be entertained.

GENERAL TOURNAMENT RULES

Team Tournament Rules

- All the tournament based games will be based on “Knock out” system.
- Participants are to submit their robots for inspection in the morning of their competition day before 9am.
- After participant’s robot are submitted for inspection and passed the restricted regulations, participants are not allow to touch their robots until their match begins with the approval of the referee. Any participant who touches their own or other’s robot without consent of the referee will be **IMMEDIATELY** disqualified.
- All the teams will be distributed in opposing pairs by IYRC committee randomly.
- Number of participants per team is determine by category of game registered.
- Each participant is to control his/her own robot only
- Only the winning teams will proceed to the next round of competition.

Rules Clarification

- The referee’s decision is considered as final during game play and objections to the referee’s judgement will not be entertained.
- Mentors must not be involved in any rules discussion for the game play.
- Video evidence will not be accepted.
- Once the Head Referee and the game referees have made a decision, no further discussions will be entertained.