

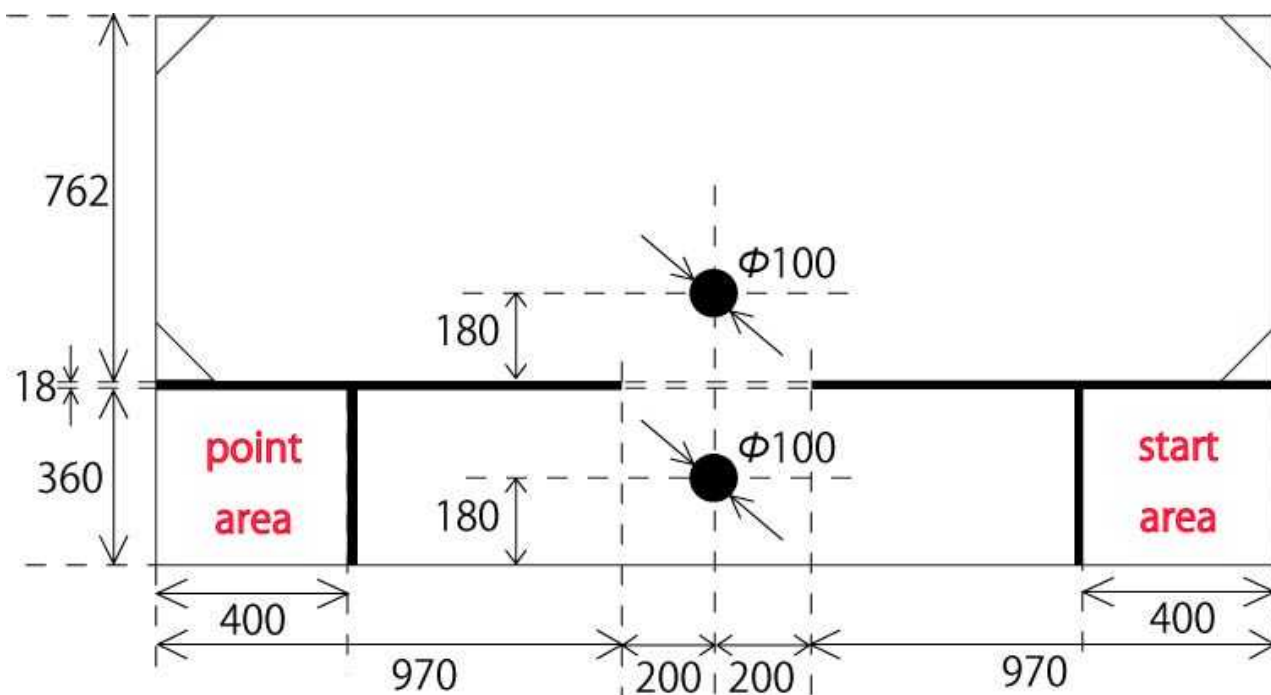
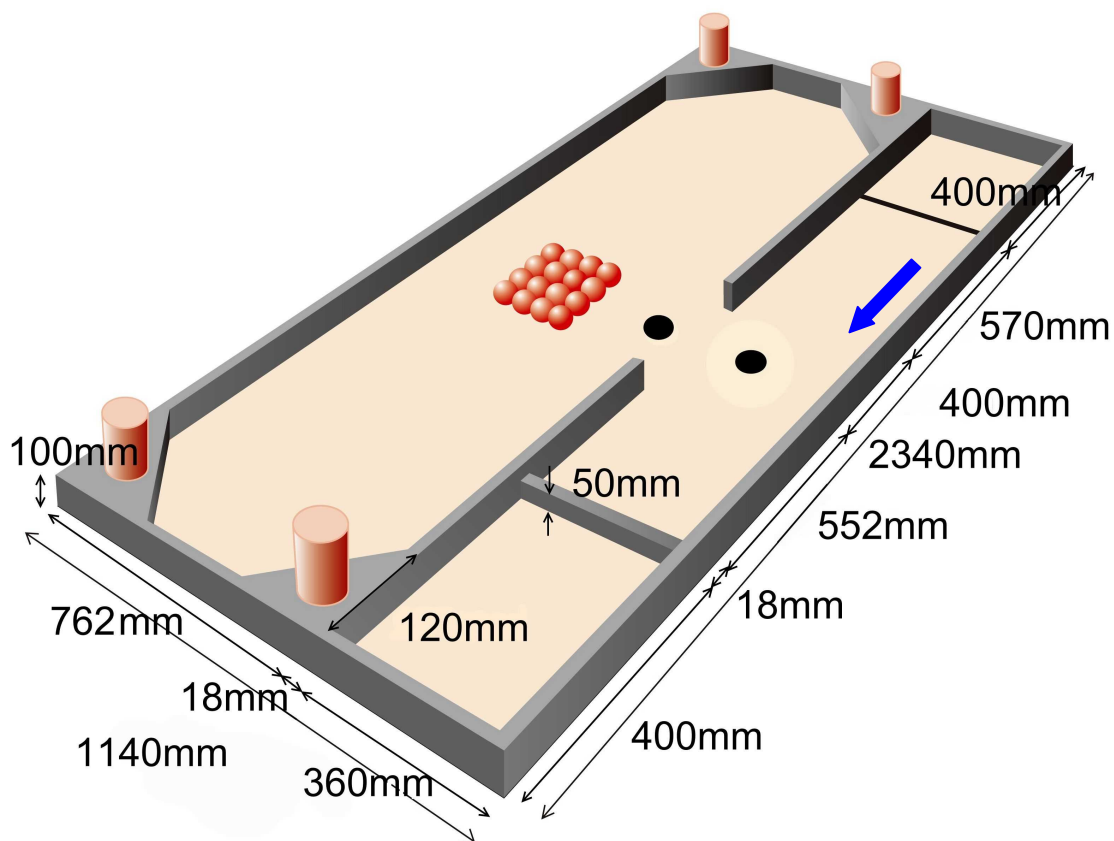
Recycle Keeper (high school)

Robot will get points by challenging 2 types of mission targets in the field.

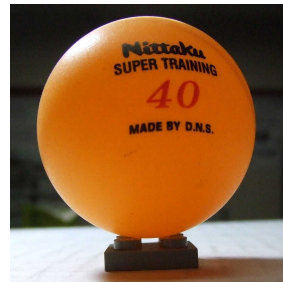
(1. Target objects on the 4 corners, 2. Ping-pong balls)

1. Court:

There will be some surprise rules. Position of Balls in the figure below is an example.



- 1) The court will be 2340mm long, 1140mm wide (The court will be white) and 100mm high. These are inner sizes. The black line will be 18mm wide. Black circle diameter will be 100mm.
- 2) The start area will be 400mm long and 360mm wide.
- 3) The point area will be 400mm long and 360mm wide. The height of the bar at the point area will be 50mm. The triangular prisms will be 120mm long, 120mm wide and 100mm high.
- 4) A gate to the main area will be 400mm wide.
- 5) Triangular prisms will be fixed on the court.
- 6) The targets will be cans. The maximum weight will be 345g. The weight of the can will be announced on the morning of November 1st.
- 7) Ping-pong balls will be put on fixed thin LEGO blocks which are 2×2 and 5mm high. The position of LEGO blocks is announced on the morning of November 1st.



2. Rules:

- 1) Each match will last for 2 minutes (=120seconds).
- 2) Robots must start from the start area. Any part of the robot is not allowed to exceed the start area before it starts.
- 3) Robot will start from the start area, go through the gate, tumbling the 4 targets on the corners and carry ping-pong balls to the point area. The sequence of tumbling the cans and carrying ping-pong balls are not restricted.
- 4) Definition
 1. Going through the gate: All parts of the robot finish go through the gate.
 2. Tumbling: Robot must knock over and fall down the object from the top of triangle prisms.

3. Scoring:

There would be “mission points” and “time points”.

1) Mission points

1. Going through the gate 10 points (only first time)
2. The number of carrying ping-pong balls 10points * the number of balls

2) Time points

It will be based on the mission time, when robot starts from the start area and finishes tumbling all 4 targets. The mission time will be cut off from the second place of decimal point.

$$\text{Time points} = (30 \text{ (seconds)} - \text{the mission time}) \times \mathbf{X}$$

Multiple number **X** is announced on the morning of November 1st.

There is no time point when it takes 30 seconds or more to tumbling all 4 targets.

If the robot is unable to finish the match, or time runs out, then it will get the mission points which it attained at that point.