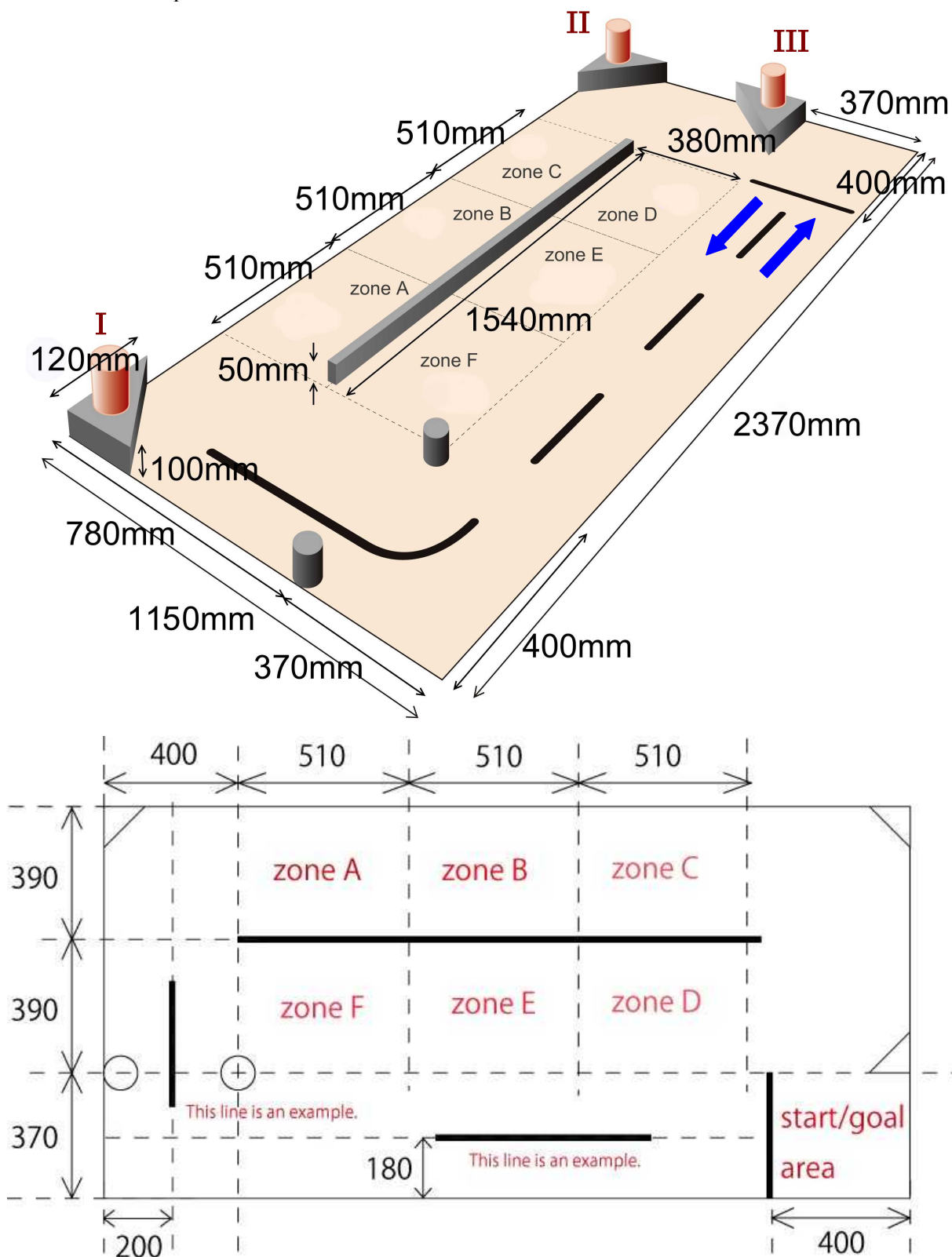


Smash Triathlon (junior high school)

This competition fundamentally follows the Elementary School's rules, but various obstacles zones like tunnel, up and down slope, will be added.

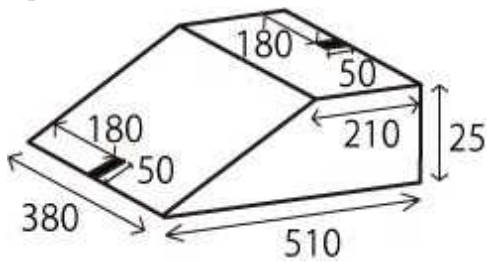
1. Court:

There will be some surprise rules.

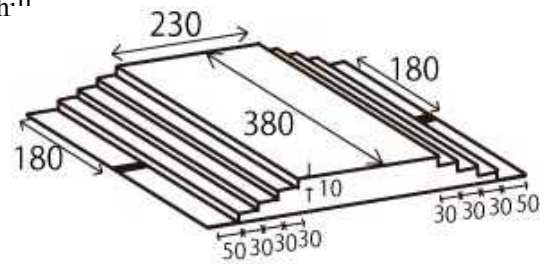


- 1) The court would be 2370mm long, 1150mm wide (The court will be white). The black line is 18mm wide. The circle diameter size is 100mm.
- 2) The start and finish area are 400mm long and 370mm wide.
- 3) The wall is 1540mm long, 18mm wide, and 50mm high. The triangular prism will be 120mm long, 120mm wide and 100mm high.
- 4) There are 2 poles that make a gate. The diameter of poles is the same size of a can.
- 5) There are 6 zones (from zone A to zone F). Each zone is 510mm long and 380mm wide, which has a slope, a tunnel, etc. Zone objects are shown in a) to g) as an images. The arrangement of objects is announced on the morning of November 1st.

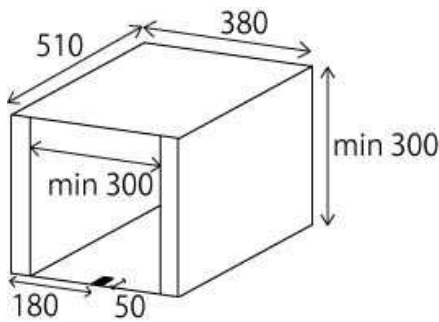
a) slope



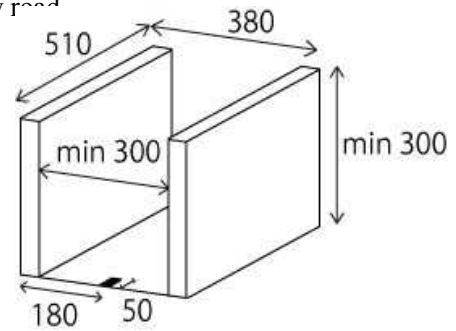
b) h'''



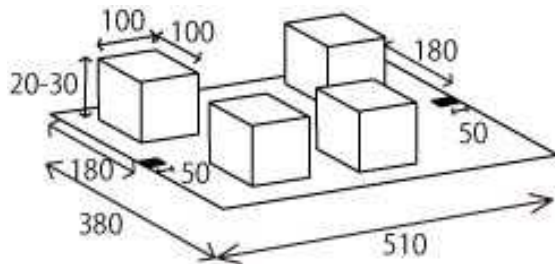
c) tunnel



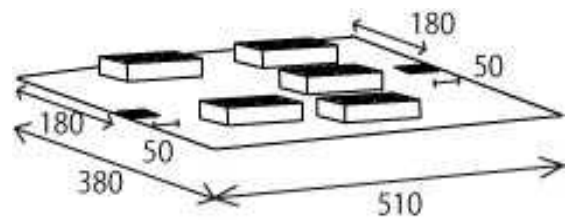
d) narrow road



e) marsh place



f) unruffled waters

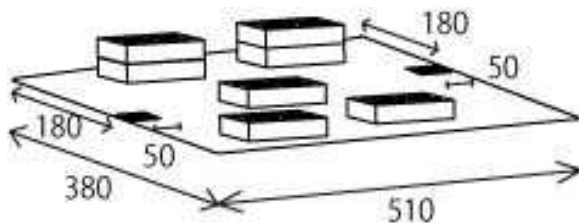


Color of the sponge is various.
Positions of Block are random.

LEGO block is 2×4, height is about 11 mm.
Color of the block is various.

Positions of Block are random.

g) turbulent waters



Object is consisted of 5 blocks. LEGO block is 2×4 height is about 11 mm. Max height is 2-tier blocks.
Color of the block is various. Positions of Block object are random.

- 6) The objects (triangular prism, wall, and poles) will be fixed on the court.
- 7) The target will be cans. The maximum weight will be 345g. The weight of a can 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 and challenge each target points and cross 6 zones. Finally robot must return to the goal area (= start area) by going through the gate again.
- 4) The sequences of tumbling are decided; I→II→III
- 5) The sequences of crossing zone are decided. A→B→C→D→E→F.

6) 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. Crossing zones: Robot must cross from a zone to the next zone.

3. Scoring:

There will be “mission points”, “time points”.

1) Mission points

- 1. Going through the gate 10 points (only first time)
- 2. Tumbling the target in the defined order (3 targets).....10points * 3
- 3. Crossing each obstacle zones in the defined sequences 10 points * 6

2) Time points

When the robot returns to the goal/start area, the time points are obtained.

Robot would get 0 time points if it returns to the goal area without going through the gate.

$$\text{Time points} = 120 \text{ (seconds)} - \text{mission time}$$

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