

## **FMPSD 6<sup>th</sup> Annual Robotics Tournament**

### **“Homegrown Fun 2016”**

**Please Note:** All challenges require the robot to remain autonomous at all times. A team will be disqualified from a challenge if they are found to be controlling the robot in any way.

#### **Challenge: Sumo Wrestling Match**

##### **Rules (Match time limit is 2 minutes and 30 seconds)**

- 1) Robots will start at either A or B. The most front portion of the wheel or leg of the robot must be on the starting point of A or B.
- 2) When the referee determines that the match has started, they will say, “Begin”.
- 3) The robots will attempt to place the other robot out of the inner circle to the peripheral area or to out of bounds.
- 4) First robot to place the other robot to the peripheral or core wins and the match is stopped.
- 5) If both robots enter the peripheral or core area(s), the match is considered a double out and neither team scores.
- 6) Only two team members may be at the challenge table for each robot. All other team members including the coaches have to be in the designated team viewing area for the duration of a challenge.

##### **Clarifications**

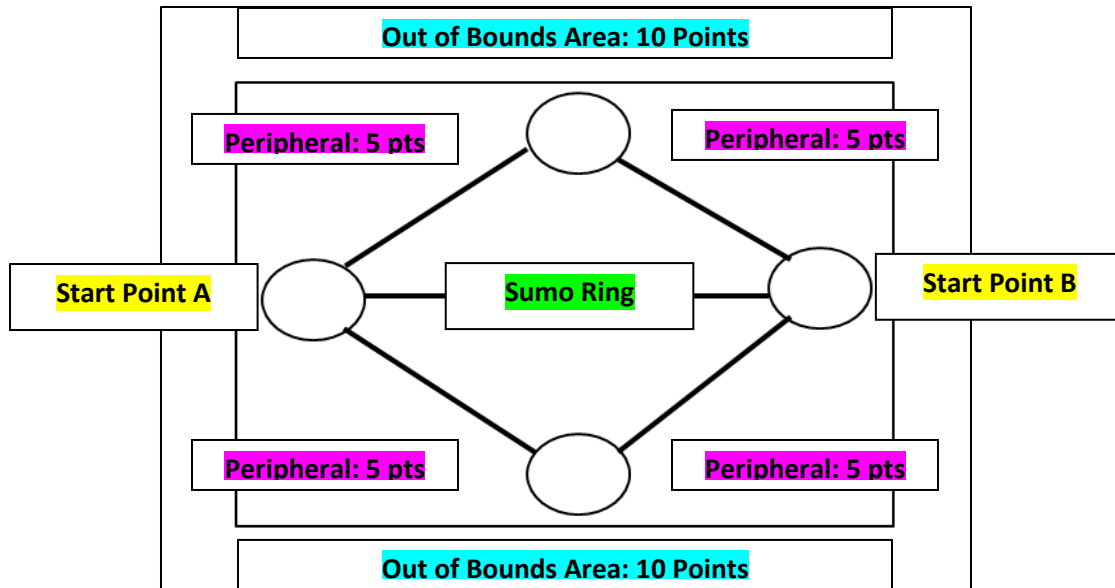
- Matches are declared over if a robot is placed in either the peripheral area or the out of bounds area, if both robots leave the core area or if time over has been declared.
- Robots are allowed to pick up other robots and place them in the peripheral area or throw them to the out of bounds area.
- Robots are allowed to use additional appendages for this match provided that the total motor count is limited to 2 large motors and 1 medium motor.
- Robots may use all the sensors that came with the educational core. They may not use additional sensors.
- The referee’s final decision stands with no right to arbitrate a decision.

##### **Scoring:**

- 3 points are awarded if the opposing robot is tipped over and remains so after the match is declared over.
- 5 Points awarded for placing the robot into the peripheral area.
- 10 Points awarded for placing the robot into the out of bounds area.

Note: It is possible to score 3 points for tipping the other robot and get additional points for placing the robot in the peripheral area or the out of bounds area.

### Challenge: Sumo Wrestling Match (2 minutes and 30 seconds)



**Please Note:** All challenges require the robot to remain autonomous at all times. A team would be disqualified from a challenge if they are found to be controlling the robot in any way.

### Challenge: Hungry Robots!

#### Rules (Time limit is 2 minutes and 30 seconds)

- 1) Your robot will start at either starting position. Some piece of the robot must be within the starting position at the start.
- 2) When the referee determines that the race has started, they will say, "On your mark, get ready, go". A team member is then able to activate the running program.
- 3) The robot will then go to gather marbles from either depository and bring back to their starting position area. There are 10 marbles in each depository.
- 4) A robot may move freely on the board with no fear of being out of bounds.
- 5) No robot may take marbles from another robots starting position. They will be immediately disqualified for this.
- 6) Only two team members may be at the challenge table for each robot. All other team members including the coaches have to be in the designated team viewing area for the duration of a challenge.

#### Clarifications

- Robots are allowed to use additional appendages for this match provided that the total motor count is limited to 2 large motors and 1 medium motor.

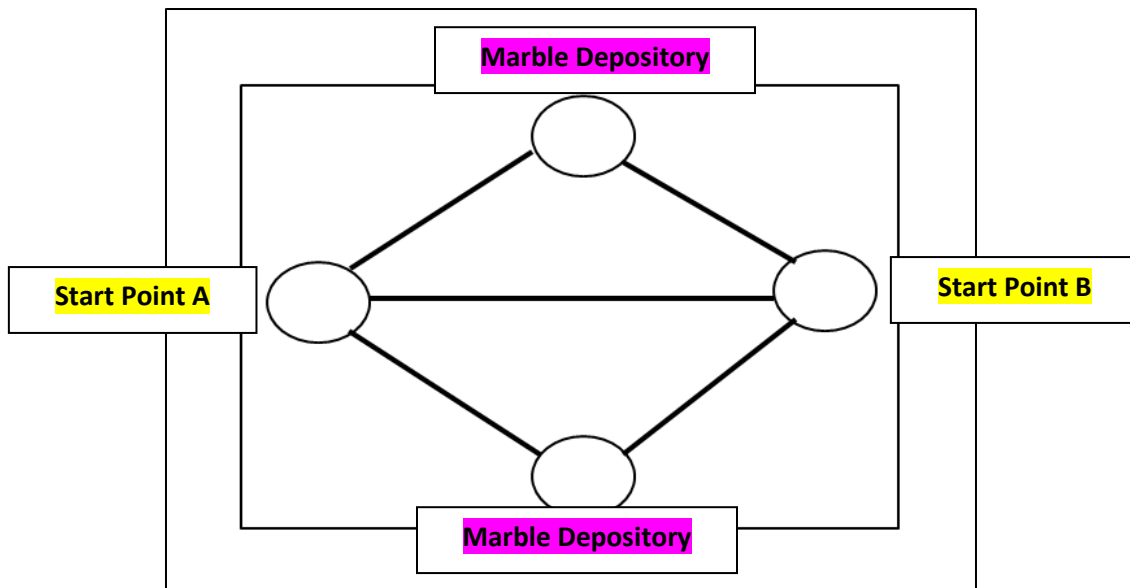
- Robots may use all the sensors that came with the educational core. They may also use additional sensors if they choose so.
- Only marbles within the robot's starting position will be counted for points.
- **The referee's final decision stands with no right to arbitrate a decision.**

#### Scoring:

Scoring is based on the final number of marbles in the robot's starting position. One point per marble will be awarded.

Bonus points are awarded for those robots who attempt to use a colour sensor during the challenge. **A bonus of 5 points will be given if there is at least one marble in their starting position.**

#### Challenge: Hungry Robots! (2 minutes and 30 seconds)



#### Challenge: Footloose (The Wedding Dance)

##### Rules (Time limit is 2 minutes and 23 seconds)

- 1) Robot is placed anywhere on the game mat.
- 2) One player is allowed to start the robot when the song begins.
- 3) The robot is expected to keep dancing until the music stops or just after. **It can be turned off by a human at that time but this will cost the team in technical and artistic marks.**
- 4) Any robot that does not stop after the judge indicates time – must be turned off immediately.

- 5) The robot is judged by one judge out of a score from 1 to 5 for both **artistic impression and technical accomplishment**.

### Clarifications

- All marks assigned are subjective based on the judge's opinion.
- Robots are allowed to use additional appendages for this match provided that the total motor count is limited to 2 large motors and 1 medium motor.
- Robots may use all the sensors that came with the educational core. They may not use additional sensors.
- **The referee's final decision stands with no right to arbitrate a decision.**

### Challenge: Foot loose – The wedding Dance (2 minutes and 23 seconds)

