

“Ball” Course (PacBot)

DESCRIPTION: This is a classic game of Pac Man with some modifications. The object of the game is to drive PacBot around the course and collect points by driving over “dots” and “fruit”, while avoiding being tagged by up to four ghosts. The game will consist of two 90 second rounds, where the field resets each round. There may be up to 2 drivers per team, but only 1 person drives "Pacbot" in each 90 second round. Drivers may switch at the end of the 90 second round. To start the game, the PacBot will be placed in the middle of the course facing “north” and “ghost-bots” will be placed in each of the four corners. Each ghost is an autonomous rolling ball. A ghost “tags” the PacBot by touching it. At this point, the PacBot will be returned to the center of the board.

The course will be 12 feet by 16 feet. Painted plywood sheets will make up the flooring with 1"x4" boards making up the walls. Lanes (spaces between boards) will be approximately 17 ¼" wide.

The "Pacbot" will be a standard CEENBoT provided by the GameMasters. Participants may provide their own CEENBot if they choose.

Scoring:

Points are awarded as follows:

- White dot, 2 pts
- Red dot, 5 pts
- Cherry, 15 points
- Being tagged by a Ghost results in a 5pt deduction.
Dots can be driven over multiple times to score points. However, the same dot cannot be driven over for points twice in a row. Driving back and forth over a single dot does not keep scoring points.
- The Cherry only counts for points after BOTH red dots have been driven over at least once. The Cherry is only scored once regardless of how many times it is driven over.
- Total score will be the sum of the two rounds.

Note: You do not lose your points when tagged by ghosts, nor does the game reset. Pacbot is just returned to the center of the course, Home Position, when tagged by ghosts and 5 Pts will be deducted at the end of the two rounds. However, PacBot is safe from Ghosts in the “Home Position” area until it drives out.

Ghosts

- Ghosts will be released at predefined times during each round. These times are subject to change and may vary by age level.

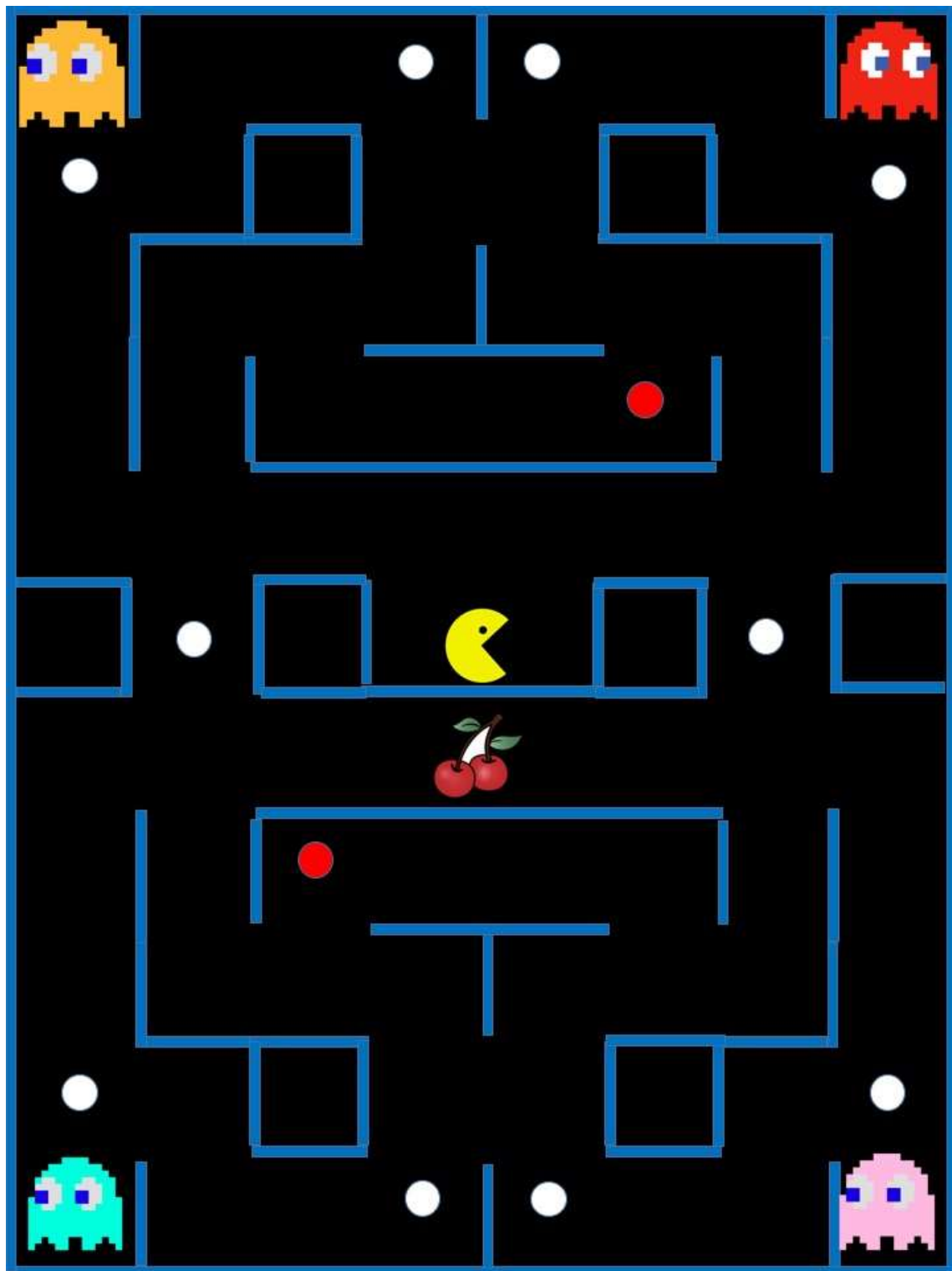
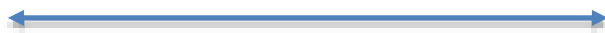
Time	Release	Time period with ghosts
0:00	Release Ghost 1	20 seconds with 1 ghost
0:20	Release Ghost 2	20 seconds with 2 ghosts
0:40	Release Ghost 3	20 seconds with 3 ghosts
0:60	Release Ghost 4	30 seconds with 4 ghosts

Rules

- Only judges are allowed to walk within the PacBot course. Judges will place the PacBot in the center of the field to begin each round and will retrieve and return the PacBot to the center upon being tagged by a Ghost. Only judges may touch ghosts.
- To get points for driving over a Dot, the majority of the Dot must be covered in order to score.
- The scoring judge will raise a white flag when a white dot is scored. The scoring judge will raise a Red Flag when a Red Dot is scored.
- When the cherry is scored the judge will call out "Bonus"

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12 Feet



16 Feet



Specs

- Full field size = 12' x 16'
- Lanes need to be at least 16" wide
- 8 lanes up/down. $144" \div 8" = 18"$ wide per lane
- using 1x4 (3/4" wide) dividers lanes will still be over 16" wide
- 11 lanes side to side. $192" \div 11" = 17.45"$ using 1x4 (3/4" wide) dividers lanes will still be over 16" wide
- All boards used will be 1"x4". Outside border will be attached to OUTSIDE of plywood. Chalk lines drawn every 18" up/down. Side to side chalk every 18" starting from top and bottom. The center lane (home location in middle) will only be 12" instead of 18".
- Parts list
- Six 4'x8' 3/4" plywood
- 20 eight foot 1"x4"s needed, should purchase 22 for buffer.

Please note: Robots cannot have in use any modification that can damage equipment, other robots, and/or the playing field.

Judges rules are final and not subject to review.

PacBot Scoring Sheet

Team: _____

Round 1 Driver: _____

	Tally	
White dots	X 2 =	
Red dots	X 5 =	
Cherry (can only be scored AFTER scoring both red dots)	X 15 =	
Tagged by Ghost	X -5 =	
	Total score round 1:	

Round 2 Driver: _____

	Tally	
White dots	X 2 =	
Red dots	X 5 =	
Cherry (can only be scored AFTER scoring both red dots)	X 15 =	
Tagged by Ghost	X -5 =	
	Total score round 2:	

Total team PacBot Score: