

# 6.270 2005 Rules Committee Rulings

## Official Questions and Answers

If you have a question about the rules, please send email to the Rules Committee. Only responses from the Rules Committee are official. If it is not clear in the Course Notes, check with the Rules Committee before you do whatever you are thinking about doing.

1. **At the minute mark, are balls in motion at the end scored? That is, if we release the balls at the last second and shut down our actuators, does scoring wait until the balls settle or occur instantly at the end?**

*From section 2.4.1 of the course notes, number 8: "The match ends when all robots and game objects on the table come to a rest." Once all the balls have stopped moving we score the match.*

2. **We're interested in exploring the possibility of programming our handyboard with 68HC11 assembly and C via GCC. Is that okay?**

*Yes. Two things to be aware of: we can't help you debug problems you might run into, and you'll have to reverse-engineer a bunch of our code that isn't well documented.*

3. **The rules don't seem to be explicit about what you can tell the robot during setup. For example, could you tell the robot its color and orientation?**

*No. During setup, you may only give calibration information to the robot. For example, you may tell your robot what black and white look like, given the lighting conditions. You may not tell your robot what side it is on, or what orientation it is in.*

4. **Page 51 of the course notes states that we may have at most three servos. Is this just a rule, or a limitation of something else?**

*That is a mistake. You may buy as many servos as you like, subject to the \$30 money limit.*

5. **Are we allowed to melt rubber bands and dip some LEGO pieces in the melted rubber?**

*No. We consider this modifying the LEGO.*

6. **Since we have a \$30 budget, are we allowed to do things like add an extra \$10 PIC or something similar to our setup?**

*Yes. You may buy any electronics or actuators you like with your \$30 budget, subject to the requirements listed in the course notes (such as documenting the items, providing schematics, etc.).*

**7. Are prices measured in 1-u or 100-u quantities?**

*We'll use 100-u quantities for pricing purposes.*

**8. Is it within the rules to use rubber bands to help gain traction and friction with the game balls on the board?**

*Yes.*

**9. Do the rules allow for disabling an opponent's robot?**

*It depends on what you mean by disabling. You cannot intentionally damage the other robot. You also cannot intentionally flip the other robot. You can, however, drive into the other robot, push the other robot around, and generally cause mayhem.*

**10. The course notes say we may modify the baseplate freely. Does this include cutting it apart and gluing pieces back together?**

*Yes, you may. Remember, however, that everything structural must be attached by LEGO. We do not consider things glued together to be attached by LEGO.*

**11. Are balls inside of the scoring area inside of a robot counted toward the total?**

*Balls are counted only if they are touching the surface of the table.*

**12. What is the length of each side of the "square" the balls are centered on?**

*7 inches.*

**13. Are we allowed to glue rubberbands around the wheels to act as treads, instead of using the provided Lego treads?**

*Yes.*

**14. Are we allowed to cool the motor drivers using dry ice?**

*No. We consider that akin to using lubricant.*

**15. Are protrusions into the voting mechanism allowed?**

*No. You cannot cross the plane of the opening.*

**16. Is it possible to program several strategies into our robot and then tell it which one to choose during the 60 second configuration period (or**

**possibly before this period)?**

*No. Robots must be autonomous. Telling the robot a strategy to use is unfair.*

- 17. A quick question about tethers -- the staff keeps mentioning that we need to "cut up the lego plate" but does that mean our tether needs to be attached to the legos?**

*As stated in the rules, at all times your robot must be connected via LEGO. If you choose to split your robot into two, the two must be connected in the same manner. Wires are not enough.*