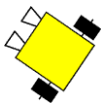

lab B.3: robot race

Name:

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vocabulary

- gear ratio
- rotational speed (revolution/min)
- angular velocity
- torque
- idler gear
- robot control (i.e.; various turning)

materials

Make sure you have all of the following materials before you start the lab:

- lego robot kit
- communications tower

instructions

1. **programming challenges**

   - Complete as many of the following programs as you can.
   - After you get each program to work, draw the code in the boxes provided and explain your approach (i.e.; physical design and robot control).

   (a) Program your robot to go as fast as possible for 4 second. Explain your physical design (i.e.; gear ratios and other modfication)

   (b) Program your robot to complete the path, provided by the instructor, as fast as possible. Explain your physical design(i.e.; gear ratios and any other modfication) and robot control (i.e.; smooth turn vs sharp turn).