Driving School Curves

Time required: 90 minutes

Please read all the directions carefully before beginning the assignment.

1. Comment your code as shown in the tutorials and other code examples.
2. Follow all directions carefully and accurately.
3. Think of the directions as minimum requirements.

Understanding

Demonstrate understanding of:

libraries, functions

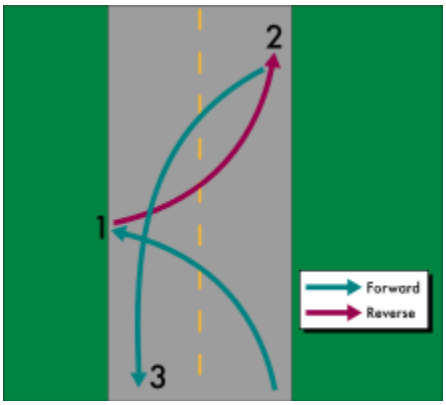
Charge your batteries. Calibrate your robot with the **CalibrateMovement** program.

Assignment

- Complete each program clockwise and counterclockwise.
- Use **Movement.h** for your movements.
- Add a **rightCircle** and **leftCircle** function to your Movement.h library.
  HINT: Adjust the power of your left and right motors to create a left half circle function and right half circle function. Use these new functions to make your curved shapes.
- Assign each shape to a different remote control button.
- Add to the **DrivingSchool2** sketch. Save the sketch as **DrivingSchoolCurves**.

Requirements

1. **3-PointTurn** - Using 3 or more turns, make a 3-point turn, like a regular car. You don't have to do curves, you can use straight angles if you wish.



2. **Circle** - Trace the path of a circle that is 1 foot in diameter. It will start and end in the same location, and in the same orientation.
   HINT: Adjust the power of your left and right motors to create a left half circle block and right half circle block. Put those together to make your curved shapes.
3. **S-Shape** – Trace two half-circles to create an S-shaped curve. Your robot will start and end in the same orientation, and the two half-circles will be the same size.
4. **Figure-8** - Move in a figure-8 shape. You did this in an earlier assignment.

Assignment Submission

- **All students** → Attach finished programs to the assignment in Blackboard.
- **In class assignment submission** → Demonstrate in person.
- **Online submission** → A link to a YouTube video recording showing the assignment placed in the submission area in BlackBoard.