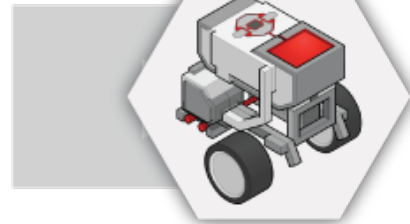


Introduction to Programming **LEGO® MINDSTORM® EV3**



CHALLENGE WRITE-UP

Data Logging: Interpretation

Answer the following questions based on the data you have collected, and the analysis you have conducted.

1. There should be two lines on your graph. What does each represent?
2. The Data Logging Block was set to record 40 points of data each second during the experiment. What happened to those data points?
 - Hint: Click the “Color and Plot Style” button next to one of the lines on your Dataset Table. Choose one of the shapes for “Plot Style”.
3. Our original hypothesis was that the Gyro Sensor “lagged” behind the actual robot’s body when turning
 - Compare the times at which the two sensors said the robot reached the 200-degree mark.
 1. *How do the two values compare? Which one comes earlier, and which one comes later?*
 2. *What does this suggest about the behavior of the Gyro Sensor?*
 3. *Does this support or refute the hypothesis?*
 - Compare the amount of turn the two sensors said the robot had made at 0.5 seconds into the program.
 1. *How do the two values compare? Which one says the robot has turned farther, and which one says the robot has turned less?*
 2. *What does this suggest about the behavior of the Gyro Sensor?*
 3. *Does this support or refute the hypothesis?*
 - Write a one-page conclusion based on the analysis and interpretation you performed in the last few steps..
 1. *State the original question being examined, along with the initial hypothesis.*
 2. *Explain the procedure you used to gather your data. Not every detail, just the parts that relate to answering the original question.*
 3. *State what the data showed.*
 4. *How do the two values compare? Which one says the robot has turned farther, and which one says the robot has turned less?*
 5. *State your conclusion about the answer to the original question.*