1. Why shouldn’t the runner change during the experiment? What are the reasons for this limitation? What will possibly happen if the runner changes?
2. Discuss briefly, how the MATLAB System Identification Tool approaches to the plant to find an approximate model? Compare this with the manual model fitting in the preliminary work.
3. Why did the model parameters change under different running conditions?
4. Did the “0-5km/h+0 degree” response include an overshoot? If yes, discuss the reasons why.
5. Explain why we chose the discrete PID controller in this experiment. What are the advantages and disadvantages of using a discrete PID in this experiment?
6. Discuss briefly, how the PID tuning of MATLAB works. Without MATLAB, purpose a method to fine tune the PID parameters around a given starting point.

Cevap: https://www.mathworks.com/help/slcontrol/ug/introduction-to-automatic-pid-tuning.html?requestedDomain=true

1. Comment on the “Human in the Loop” method. What are the discrepancies with respect to the obtained runner heart model?