

MAE106 Homework 1

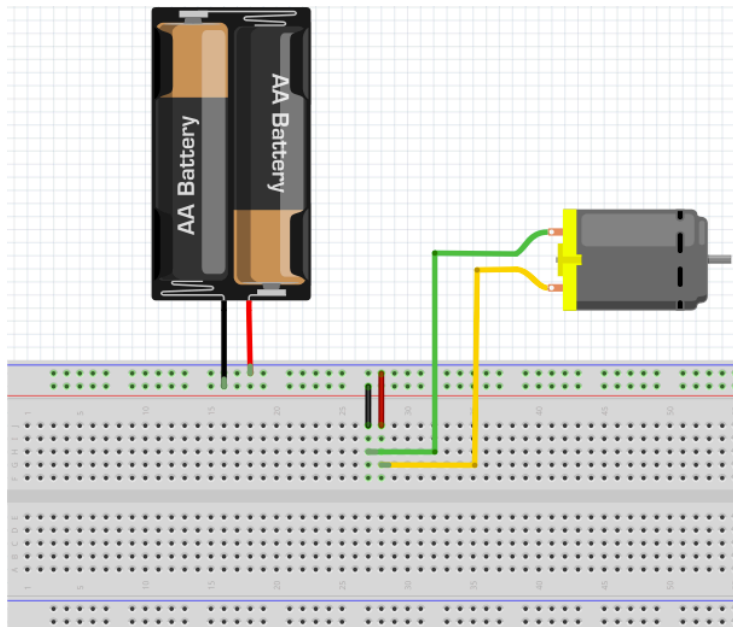
Circuits review

University of California, Irvine
Department of Mechanical and Aerospace Engineering

Problem 1

Assume that in the following circuit we have a 12V battery and that the resistance across the motor when running without a load is 40 ohms.

- a) How much current, in mA, will flow through the motor?
- b) What is the power, in watts, dissipated by the motor?
- c) If we wanted to run this motor for 10 minutes under these conditions, what capacity, in mAh, do we need from the battery?



Problem 2

Turn in the sketch of your robot. Include the names and roles of all your teammates.