MAE106 Homework 1
Circuits review

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.