

# MEMS 0031 - Electrical Circuits

## Quiz #2

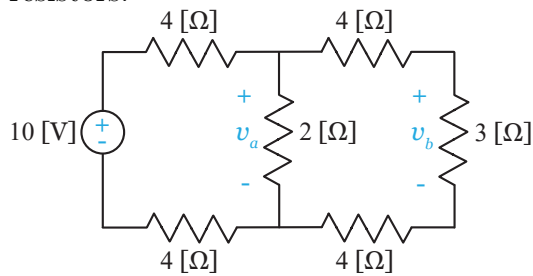
May 22<sup>nd</sup>, 2019

90 points

Name: \_\_\_\_\_

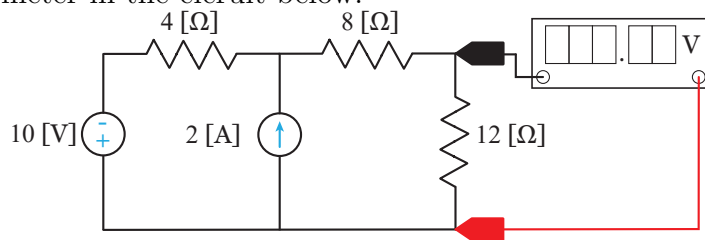
### Problem #1

(25 pts.) Using only KVL/KCL/Ohm's law, determine the voltage drop across the 2  $[\Omega]$  resistor,  $V_a$ , the 3  $[\Omega]$  resistor, as well as the currents flowing through the 2 and 3  $[\Omega]$  resistors.



### Problem #2

(30 pts.) Using only KVL/KCL/Ohm's law, determine the voltage measured by the voltmeter in the circuit below.



### Problem #3

(35 pts.) Given the schematic below, using only KVL/KCL/Ohm's law, determine the numeric values of  $V_a$  and  $i_a$ .

