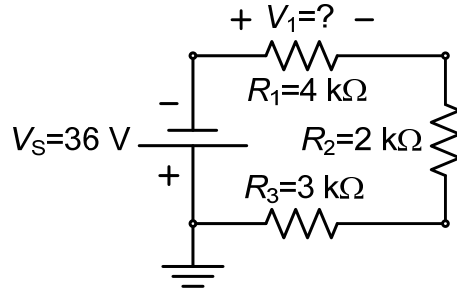
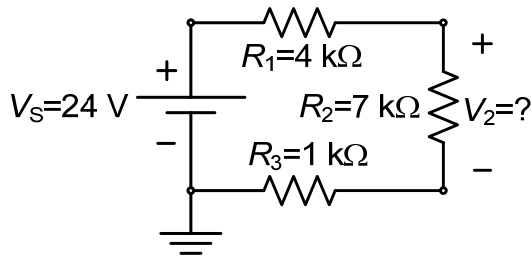
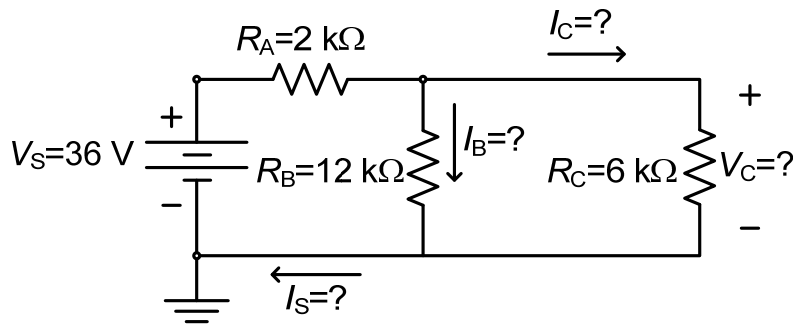


You are allowed to use your lab manual and lab notebook during the quiz.

1. (30 points) Two separate circuits are shown. Determine the values of voltages V_2 and V_1 , as indicated.



2. (40 points) In the circuit shown, find I_B , I_C , I_S , and V_C . Show your work step by step and provide appropriate units for your answers.



3. (30 points) Using a fixed 10 V dc voltage source and only four 1 kΩ resistors, design a voltage-divider circuit to produce an output voltage of value 6 V. Draw the voltage-divider circuit completely and indicate clearly the two terminals across which the measured voltage will equal 6 V.