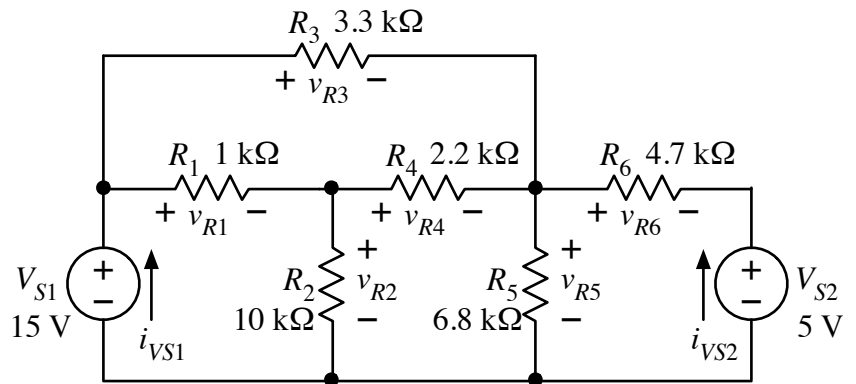


Name _____

Circuit 1

a. Build the circuit on your circuit board.

0 + 5 +10



b. Measurements

Use the voltmeter to find the DC voltage across each resistor.

$v_{R1} =$ _____ $v_{R2} =$ _____ $v_{R3} =$ _____

$v_{R4} =$ _____ $v_{R5} =$ _____ $v_{R6} =$ _____

Use the ammeter to measure the DC current through the sources V_{S1} and V_{S2} . (Note current direction.)

$i_{VS1} =$ _____ $i_{VS2} =$ _____

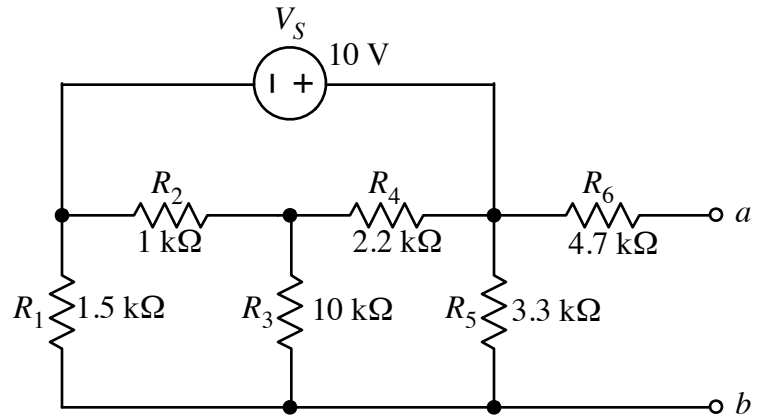
Measurements: 0 + 5 +10

c. Questions: _____ / 10

d. Total for circuit 1: _____ / 30

Circuit 2

The source in the circuit at right is DC.



a. Build the circuit on your circuit board.

0 + 5 +10

b. Measurements: Use the multimeter to determine the Thevenin equivalent voltage and resistance with respect to terminals *a* and *b*.

$V_{Th} =$ _____ $R_{Th} =$ _____

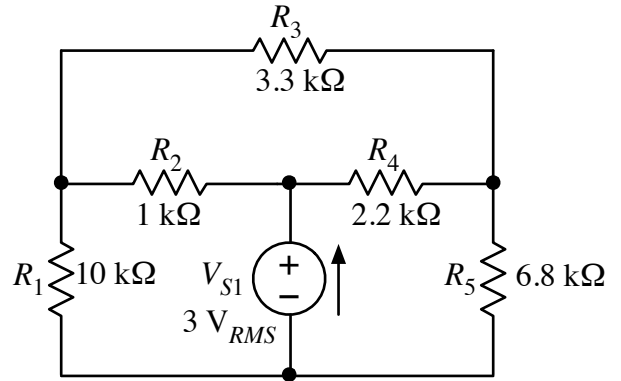
Measurements: 0 + 5 +10

c. Questions: _____ / 10

d. Total for circuit 2: _____ / 30

Circuit 3

The voltage source is an AC voltage with frequency of 2 kHz (2000 Hz) and amplitude of 3 V_{RMS} (8.5 V peak-to-peak).



a. Build the circuit on your circuit board.

0 + 5 +10

b. Use the oscilloscope to correctly display V_S and v_{oc} simultaneously. Adjust the vertical scales so that both traces have the same scaling and the V_S trace is as big as possible on the screen with having the tops and bottoms clipped off. Adjust the horizontal scale so that there are no more than three periods showing on the display.

Use the voltmeter to measure the all the resistor voltages and then use the ammeter to measure the source current.

$v_{R1} =$ _____; $v_{R2} =$ _____; $v_{R3} =$ _____

$v_{R4} =$ _____; $v_{R5} =$ _____; $i_{VS} =$ _____

Measurements: 0 + 5 +10

c. Questions: _____ / 10

d. Total for circuit 3: _____ / 30