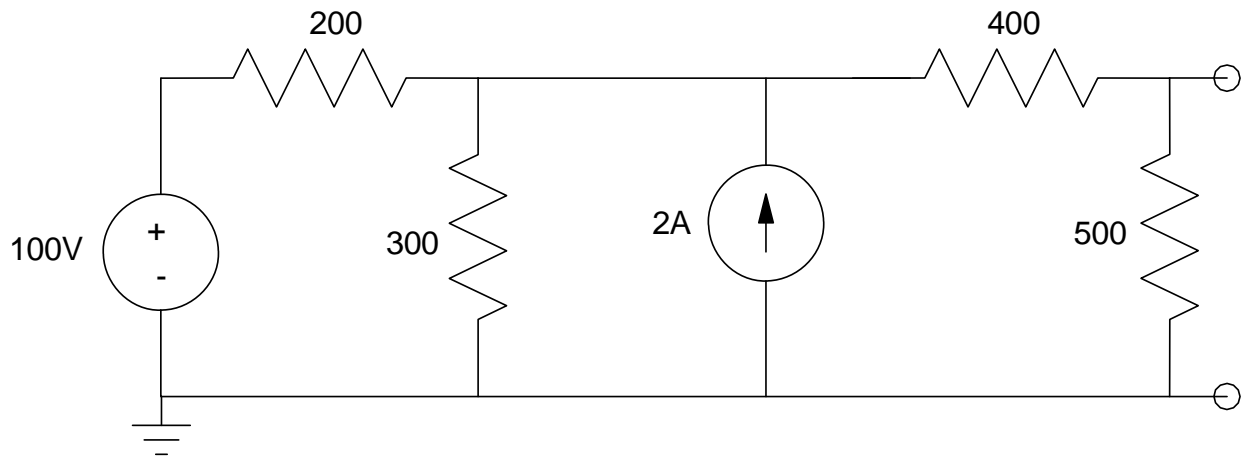


# EE 206 Test #2 - Name \_\_\_\_\_

Thevenin Equivalents - Max Power Transfer - Superposition - Operational Amplifiers. March 8, 2019

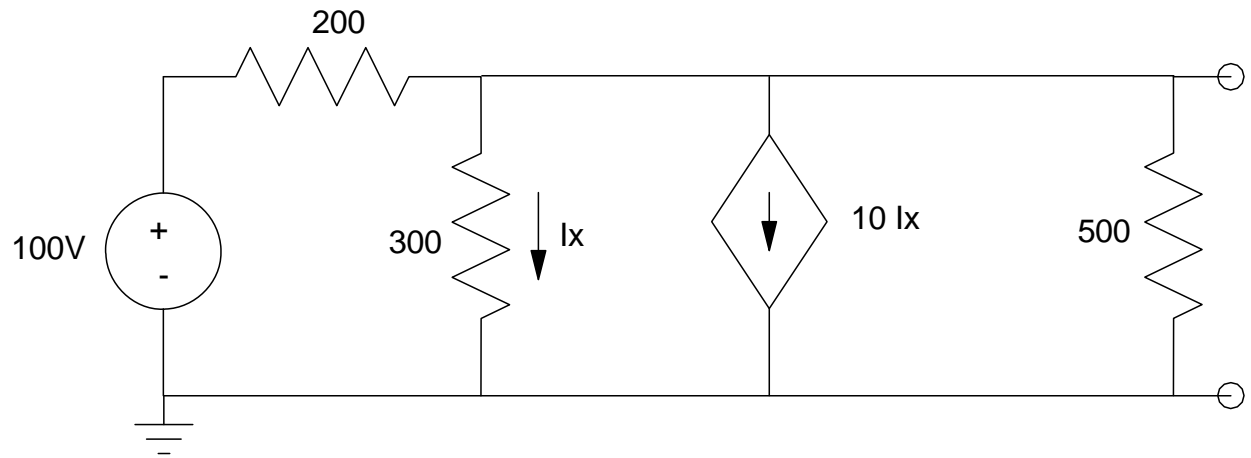
1) Determine the Thevenin equivalent for the following circuit.

Vth	Rth



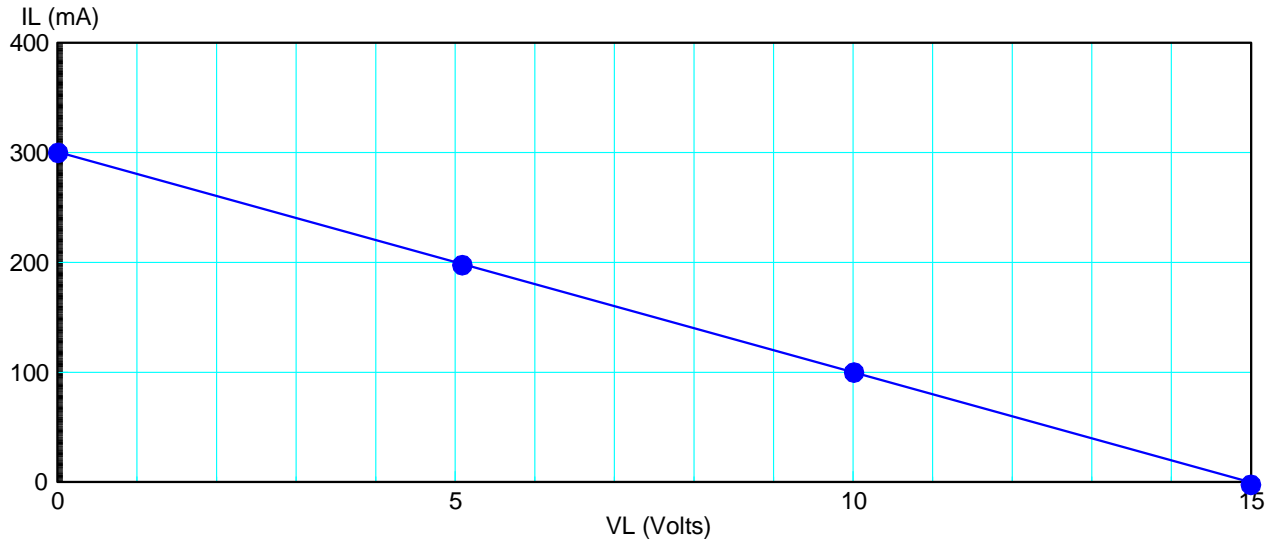
2) Determine the Thevenin equivalent for the following circuit

Vth	Rth



3) The voltage and current for a circuit is measured as the resistance changes.

R	infinity	100 Ohms	25 Ohms	0 Ohms
V	15V	10V	5V	0V
I	0mA	100mA	200mA	300mA



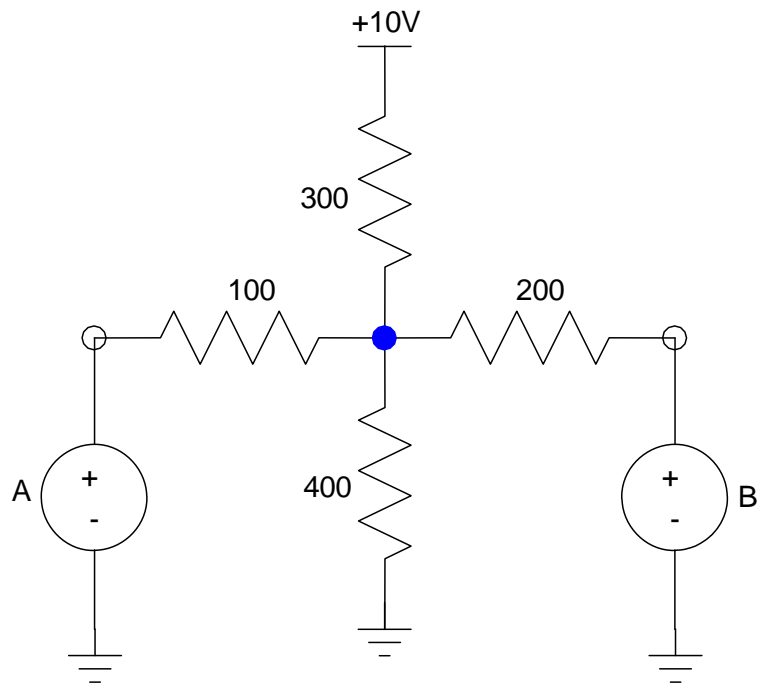
From this data, determine the Thevenin equivalent and the maximum power you can get out of this circuit.

Vth	Rth	R for maximum power transfer	Max power to R

4) Find the voltage at Y as a function of A and B

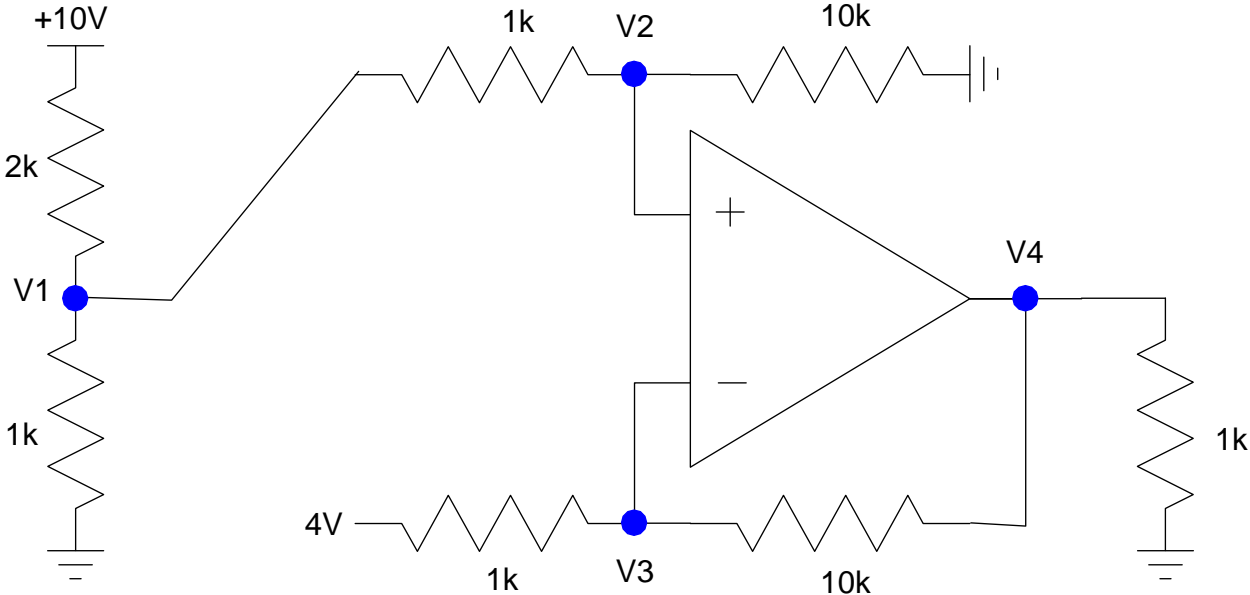
$$Y = aA + bB + c$$

a	b	c



5) Determine the voltages V1, V2, V3, V4. Assume ideal op-amps.

V1	V2	V3	V4



Bonus! Wealth inequality exists in the United State: presently, 3 families own over half of the wealth of the country.

Is wealth inequality a good thing or a bad thing? Explain.