SERIES AND PARALLEL CIRCUITS

1. A 30.0 Ω resistor is connected in parallel with a 20.0 Ω resistor. The parallel
connection is placed in series with an 8.0Ω resistor, and the entire circuit is placed
across a 60.0 V difference of potential.
a. Draw the circuit.

b.	What	is the effective resistance of the parallel portion of the circuit?
c.		is the effective resistance of the entire circuit?'
d.	What	is the current in the entire circuit?
e.	What	is the voltage drop across the 8.0 Ω resistor?
f.		is the voltage drop across the parallel portion of the circuit?
g.		is the current in each line of the parallel portion of the circuit?
	2.	Two 60.0 Ω resistors are connected in parallel. This parallel arrangement is connected in series with a 30.0 Ω resistor. The entire circuit is then placed across a 120-V potential difference. a. Draw a diagram of the circuit.
		b. What is the effective resistance of the parallel portion of the circuit?
		c. What is the effective resistance of the entire circuit?
		d. What is the current in the circuit?
		e. What is the voltage drop across the 30-Ω resistor?
		f. What is the voltage drop across the parallel portion of the circuit?
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		g. What is the current in each branch of the parallel portion of the circuit?
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3. Three 15- Ω resistors are connected in parallel. This arrangement is connected in series with a 10- Ω resistor. The entire circuit is then placed across a 45-V difference in potential . a. Draw a diagram of the circuit.