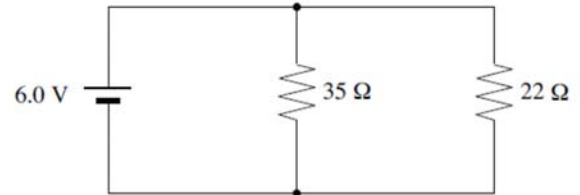


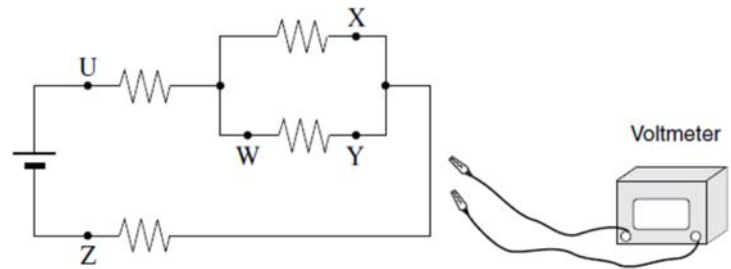
Circuits Review

1.) In an electric circuit, 6.25×10^{18} electrons flow past one point in 0.10 s. What is the current?

2.) What current would be drawn from the power supply in the circuit shown below?

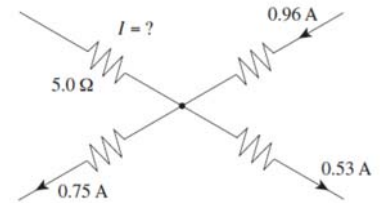


3.) A student needs to connect a voltmeter to measure the potential difference across the parallel resistors in the circuit shown right. Across which two connection points should the student connect the voltmeter?

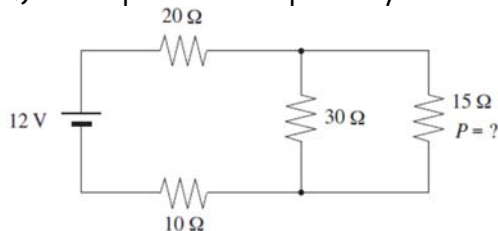


4.) A circuit junction is shown below. What is the current and its direction through the 5.0Ω resistor?

	CURRENT	DIRECTION
A.	0.32 A	away from junction
B.	0.32 A	towards the junction
C.	2.24 A	away from junction
D.	2.24 A	towards the junction



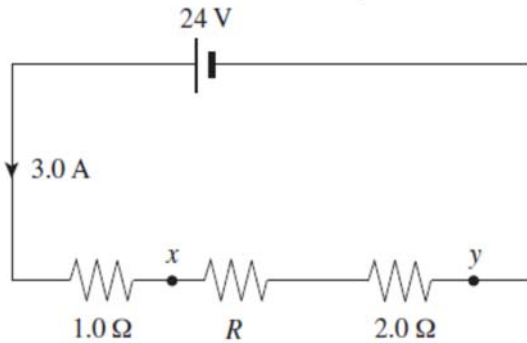
5.) What power is dissipated by the 15Ω resistor in the circuit shown?



6.) A student is instructed to determine the amount of charge flowing past a point in a circuit of unknown resistance during an experiment. What equipment will permit the student to do this?

- voltmeter
- ammeter, voltmeter
- ammeter, stopwatch
- voltmeter, stopwatch

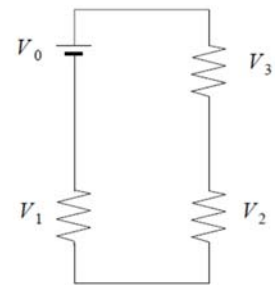
- 7.) A series circuit consists of a battery and three resistors arranged as shown in the diagram below. What is the potential difference V_{xy} ?



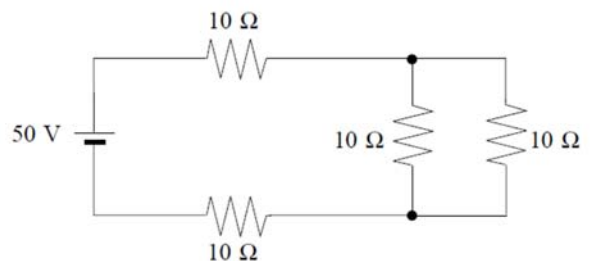
- 8.) A 12 V battery is connected to a 20 Ω resistor. How much charge flows through the battery in 3.5 s?

- 9.) Which of the following relationships correctly applies to the circuit shown?

- A. $V_0 = V_1 + V_2 + V_3$
- B. $V_0 + V_1 = V_2 + V_3$
- C. $V_0 = V_1 = V_2 = V_3$
- D. $\frac{1}{V_0} = \frac{1}{V_1} + \frac{1}{V_2} + \frac{1}{V_3}$



- 10.) In the following circuit, what current is drawn from the battery?



- 11.) A 75 W bulb is connected across a 120 V source. While the bulb is lighted, what is the effective resistance of the bulb?

- a.) 0.62 Ω
- b.) 1.6 Ω
- c.) 47 Ω
- d.) 190 Ω

Answers: 1.) 10 A, 2.) 0.44A, 3.) W&X or W&Y, 4.) B, 5.) 0.6 W, 7.) 21 V, 8.) 2.1 C, 9.) A, 10.) 2.0 A, 11.) D