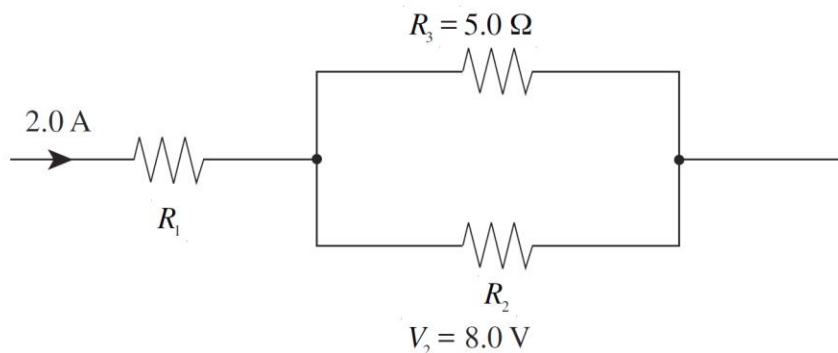


Unit 7 Quiz 1 Version 1

1.

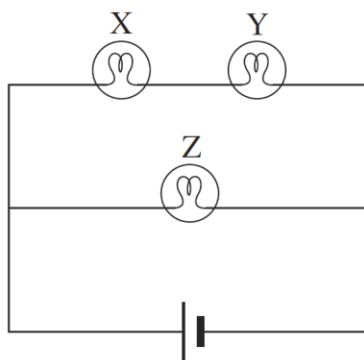
A current of 2.0 A flows through resistor R_1 as shown below.



What is the current flowing through the 5.0Ω resistor?

- A. 0.40A
 - B. 1.0 A
 - C. 1.2 A
 - D. 1.6 A
-

2. Three identical light bulbs are placed in a circuit as shown.

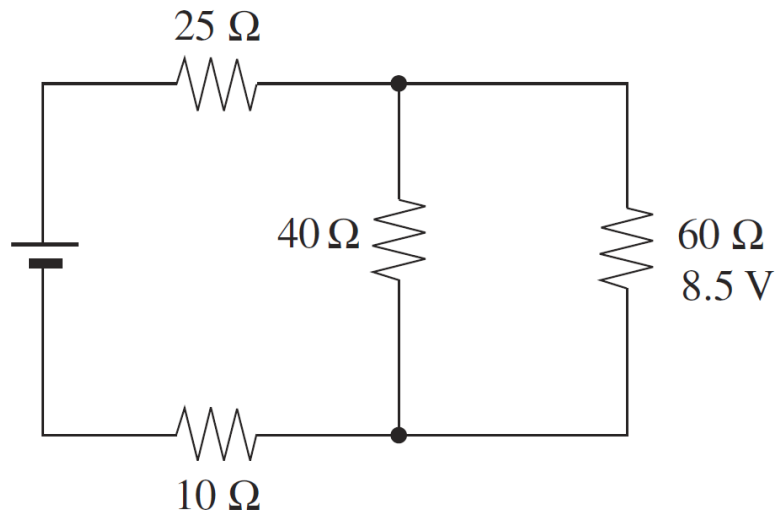


Which of the following is correct?

- A. The voltage and current are the same for all three bulbs.
- B. The current in light bulb Z is less than the current in light bulb X.
- C. The current in light bulb Z is greater than the current in light bulb Y.
- D. The voltage across light bulb Z is less than the voltage across light bulb X.

Please don't hand this quiz in until you've marked it. A solution key will be emailed out on Wednesday.

3.

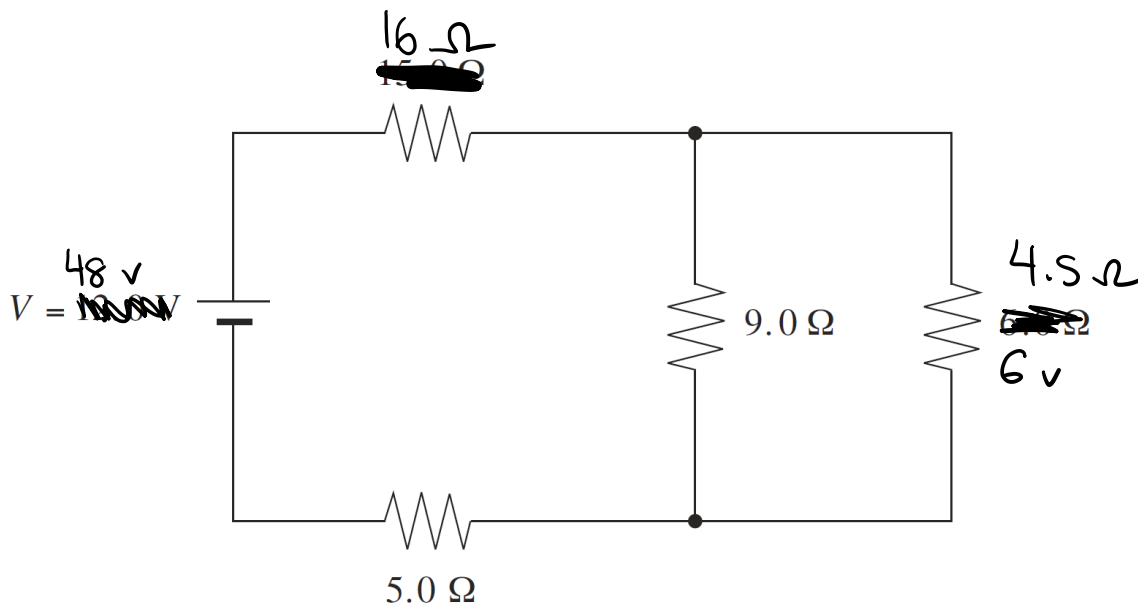


a) What is the total current leaving the battery? (3 marks)

b) What is the voltage of the battery? (4 marks)

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4.



a) Find the power loss through the 5 Ω resistor. (4 marks)

b) Suppose the 4.5 Ω resistor is removed from the circuit. If the 5 Ω resistor is a light bulb, how does its brightness compare to its brightness in part (a)?

The bulb is: brighter dimmer unchanged

(circle the correct answer) (1 mark)

c) Using principles of physics, defend your answer to part (b) (2 marks)

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