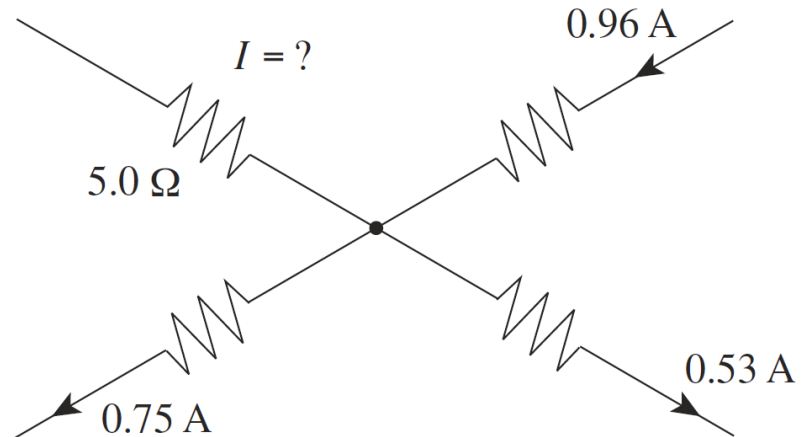


**Unit 7 Quiz 2 Version 1**

1. The diagram below shows part of an electric circuit:

A circuit junction is shown below.

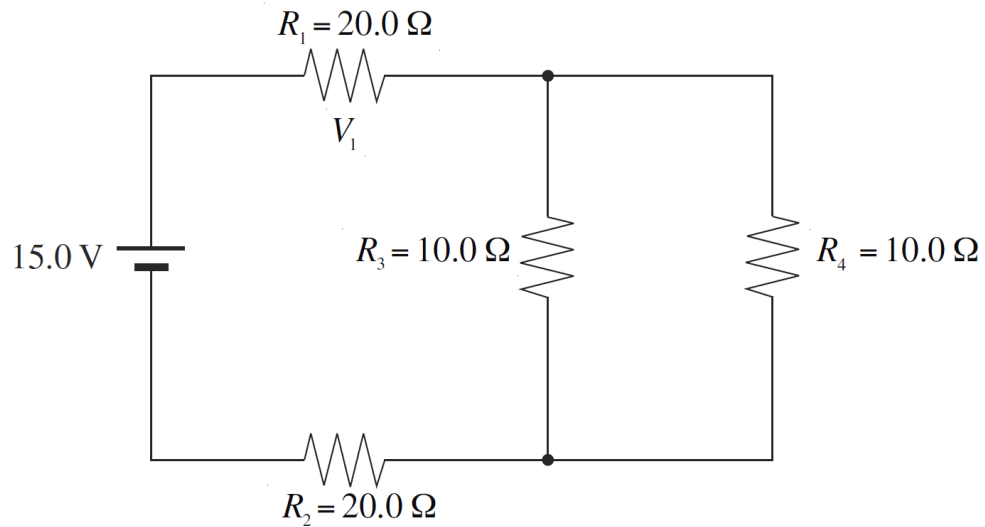


What is the current and its direction through the  $5.0 \Omega$  resistor?

Magnitude: \_\_\_\_\_ Direction: \_\_\_\_\_ (2 marks)

2.

Four resistors and a 15.0 V power supply are arranged to form the circuit shown in the diagram below.



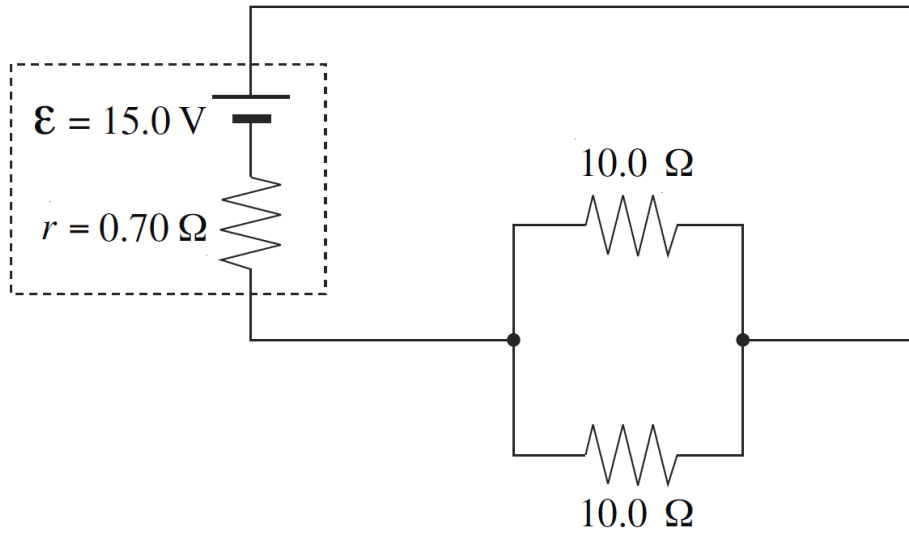
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a) What is the total resistance of this circuit? (3 marks)

b) What is the total current leaving the battery? (2 marks)

c) What is the voltage drop,  $V_1$ , across  $R_1$ ? (2 marks)

3.



a) What is the terminal voltage of the cell? (4 marks)

b) Suppose the bottom  $10 \Omega$  resistor is removed. The terminal voltage of the battery will: (circle the correct answer)

increase                      decrease                      (1 marks)

Using principles of physics, defend your answer: (2 marks)

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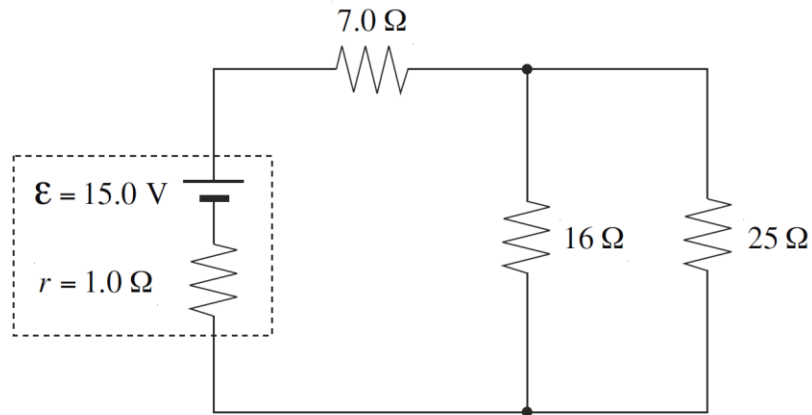


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4.

What is the power dissipated in the  $16\ \Omega$  resistor?

(7 marks)