

FSK224.A1 - Electronics

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Due: Friday, August 20th, 2010

1. Consider Fig. 1, in which eight identical resistors form the edges of a cube. Determine the effective resistance across the points **A** and **B**[10 marks].

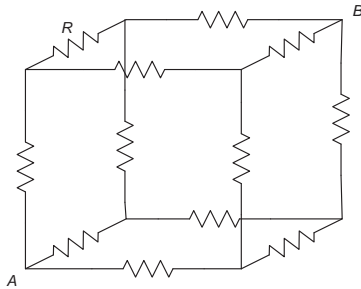


Figure 1: Determine the effective resistance R_{AB} .

2. A certain Motorola phone charger produces 4.0V with no phone connected. If this voltage drops to 3.7V when the Motorola phone draws 200mA from it, determine
 - a. the internal resistance (output resistance) r of the charger,
 - b. the maximum possible current that the charger can deliver,
 - c. the resistance of the Motorola charging circuit,
 - d. the voltage output be if a load of 8.5Ω is connected.
3. Find the current through the 10Ω resistor in Fig. 2.

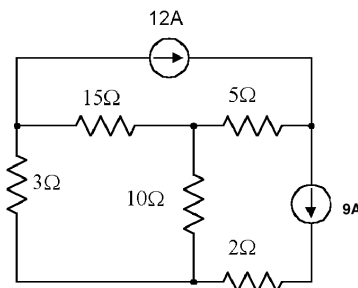


Figure 2: Circuit 2.