PP Electrical Circuits – Series

1. A 12.0 V storage battery is connected to three resistors, 6.75 Ω , 15.3 Ω and 21.6 Ω respectively. The resistors are joined in series.
2. Calculate the equivalent resistance.
3. What is the current in the circuit?
4. A 4.0 Ω resistor, an 8.0 Ω resistor and a 12.0 Ω are connected in series with a 24.0 V battery.
5. Calculate the equivalent resistance.
6. What is the current in the circuit?
7. What is the current in each resistor?
8. A series combination of two resistors, 7.25 Ω and 4.03 Ω is connected to a 9.0 V battery.
9. Calculate the equivalent resistance of the circuit and the current.
10. What is the potential difference across each resistor?
11. A 7.0 Ω resistor is connected in series with another resistor and a 4.5 V battery. The current in the circuit is 0.60A. Calculate the value of the unknown resistance.
12. Several light bulbs are connected in series across a 115 V source of emf
13. What is the equivalent resistance if the current in the circuit is 1.70A?
14. If each light bulb has a resistance of 1.50 Ω, how many light bulbs are in the circuit?