OHMS LAW AND POWER

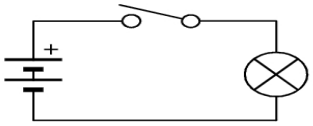
You will need to learn to use these equations:

Voltage = Current x Resistance or **V = IR**

Power = Current x Voltage or **P = IV**

Now try these questions - show your working out:

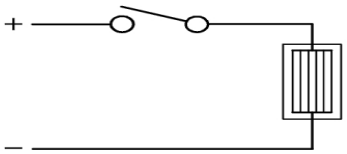
Question 1 A torch is operated by a 3v battery. When the switch is closed the bulb draws 0.075 Amps from the battery. What is the resistance of the bulb?



Question 2 A toy car with an electric motor draws 0.25 Amps from the supply. It has an effective resistance of 60 ohms. What is the voltage of the supply?

Question 3 When starting a motor car, a current of 80 Amps is drawn from the 12 volt car battery. How much Power is dissipated in the starter motor?

Question 4 To defrost the rear windscreen of a motor car, a heating element has an electrical current flowing through it. This is connected to the 12 volt battery. The power dissipated through the heating element is 36 watts.



a) What is the current flowing through the element?
b) What is the resistance of the heating element?

Question 5 A solenoid for a pinball table has a rating of 45 watts and a resistance of 5 ohms.
a) What is the current flowing through the solenoid?
b) What is the correct voltage to supply to the solenoid?