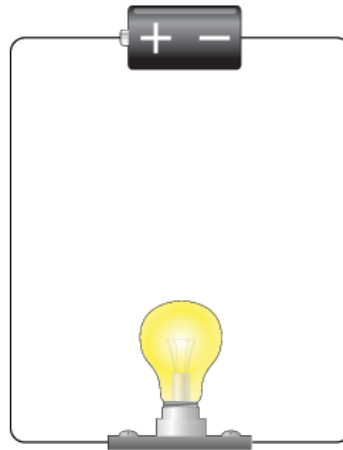




Electricity S2

Homework Booklet

NAME _____

CLASS _____

A community of learning and faith, built upon love and ambition

Belief
Perseverance
Respect

#ThisIsHowWeDoItHere



Min. Am. Exalt. La. Seigneur

Homework 1

Q1

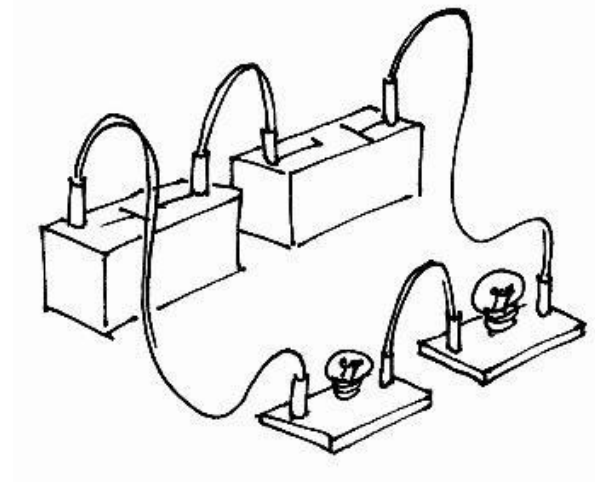
- a) What type of energy is transferred around a circuit?

- b) What energy change occurs in a bulb?

- c) What energy change occurs in a buzzer?

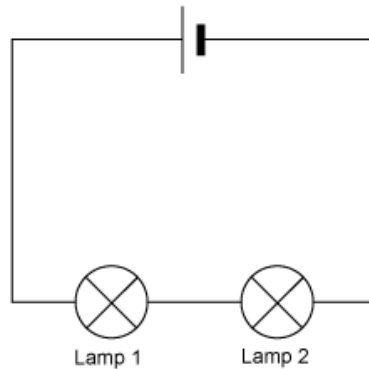
Q2 Draw a circuit diagram for a circuit with 2 batteries, a bulb and a switch.

Q3 Draw the correct diagram for this circuit.



Homework 2

Q1 If lamp 1 is unscrewed from its holder, what will happen to lamp 2?

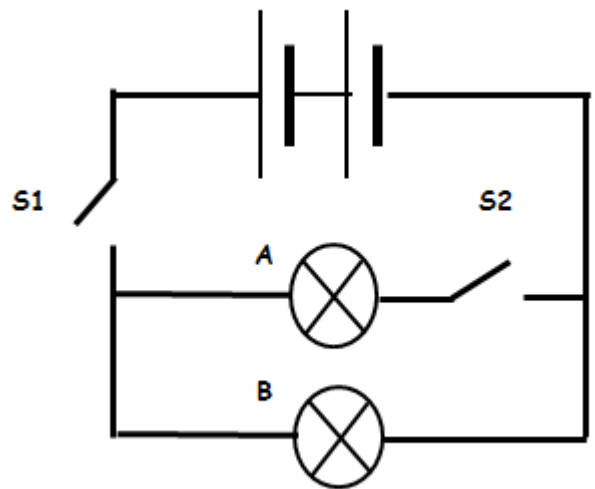


Q2 In the circuit shown: which bulb will light up?

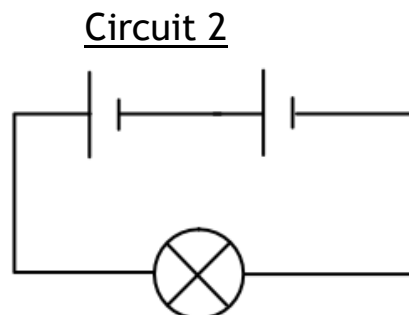
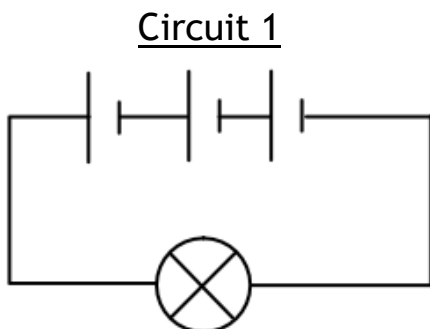
- a) When both switches are open?

- b) When both switches are closed?

- c) When switch s2 is open and s1 is closed?

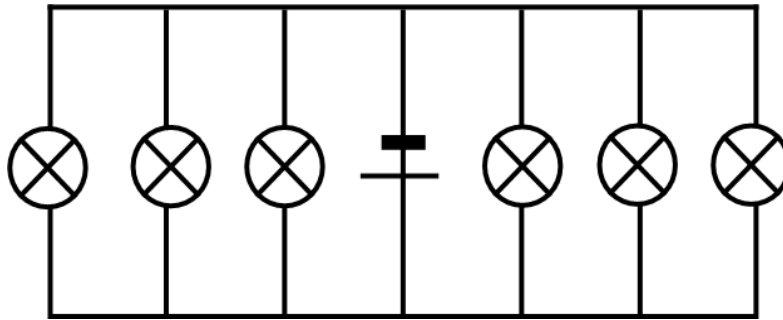


Q3 In which of these two circuits would the current be greatest? Circle the circuit.



Q4

- a) Look at the circuit diagram below. Is it a series or parallel circuit?

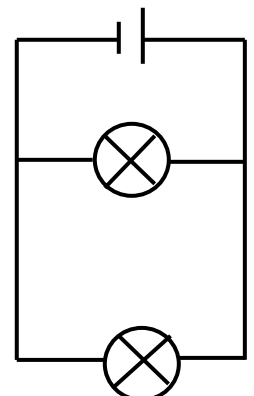


- b) How many different routes are there around the circuit?

- c) Draw a circuit which has a battery and two bulbs in parallel.

Q5 The lamps in this house are wired in parallel.

Explain the benefits (good points) of the lamps being wired in a parallel circuit.



Homework 3

Q1 Complete the following sentences about current and voltage using the word bank below.

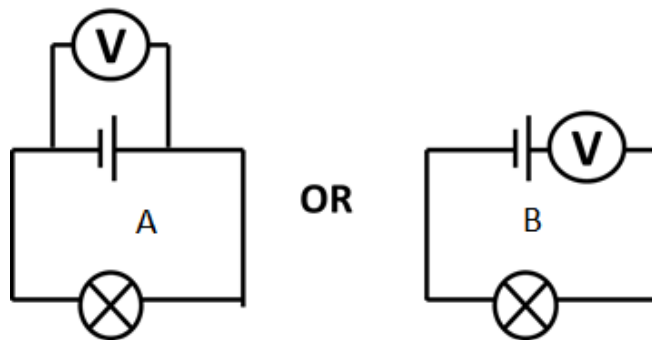
_____ is the flow of electricity and _____ pushes the current round a circuit.

The unit of Voltage is _____ and the unit of Current is _____

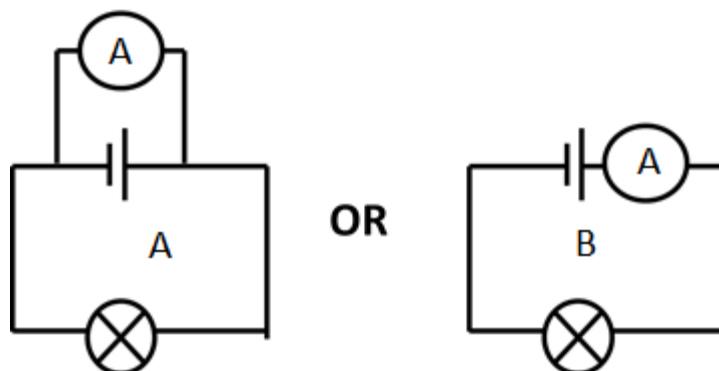
Voltage is measured using a _____ and Current is measured using a _____.

ammeter volts voltage ampere current voltmeter

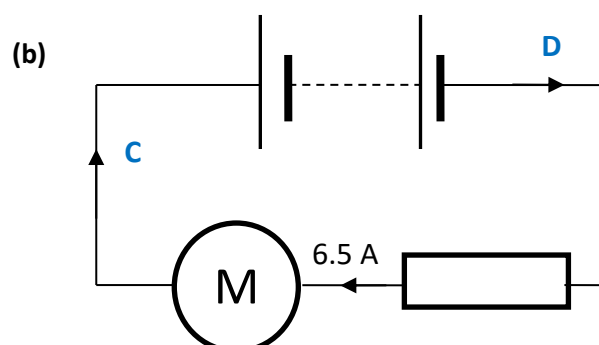
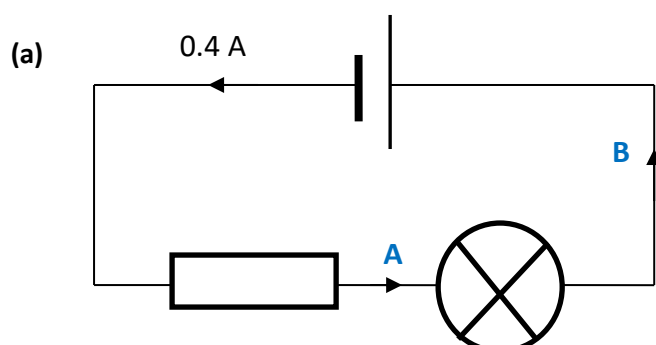
Q2 a) Which picture shows the correct way to measure **voltage**, A or B?



b) Which picture shows the correct way to measure **current**, A or B?

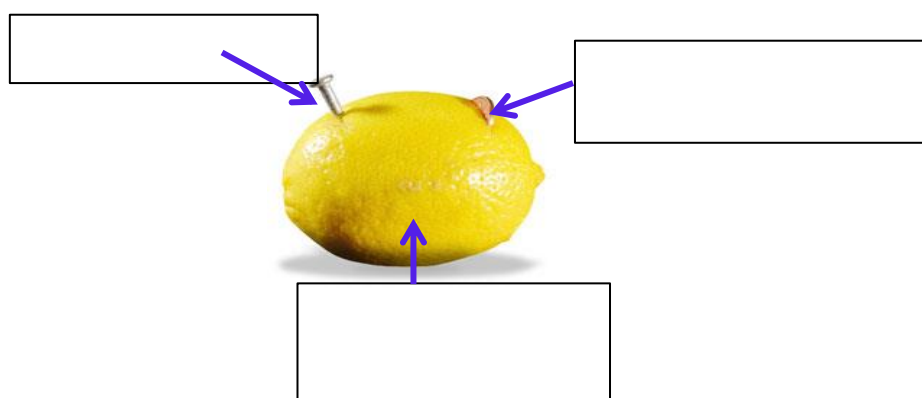


3. Give the size of the current at the given points in each series circuit.



Homework 4

Q1. We can make a lemon using a range of materials found in our homes. Copy and label the following diagram to show how a battery can be made from a lemon.



Q2 What is the energy change inside a battery?

Q3

a) What is an electrolyte?

b) What is the electrolyte in the lemon battery?

Q4

Length (cm)	Resistance (Ω)			Average Resistance (Ω)
10	0.7	0.8	0.9	
20	1.6	1.6	1.6	
30	2.7	2.8	2.8	
40	3.1	3.3	3.2	
50	3.5	3.3	3.4	
60	4.7	5.0	4.8	

A group of students are investigating the effect of the length of a conductor on its resistance.

The results of their experiment are shown above.

(a) Which is the independent variable in this experiment?

(b) Calculate the average resistance (remember to use an appropriate number of decimal places in your answer).

(c) Plot these results on a **line** graph.

