S.G. Physics Homework 1 After Activity 6 Using Electricity Unit

Name _____ **Class** _____ **Date Due** _____

_____

1. Complete the following table

Appliance	**Energy Change**	**Approx. Power Rating**
Light Bulb	_____	_____
Television	_____	_____
2 Bar Fire	_____	_____
iron	_____	_____

(8)

2. Complete the following table,

Pin Name	**Colour of Insulation**
_____	green and yellow
_____	brown
_____	blue

(3)

3. Draw the double insulation symbol

(1)

4. Which wire is not required to an appliance which is double insulated?

_____ (1)

5. Why would connecting the fuse in the neutral wire be unsafe?

_____

_____

_____ (2)

15

S.G. Physics Homework 2 After Activity 8 Using Electricity Unit

Name _____ **Class** _____ **Date Due** _____

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1. Select the correct answers from the choices.

"In a conductor there (are/are no) charges, when a voltage is supplied the (electrons/protons/neutrons) which have (negative/no/positive) charge move around a circuit."

(3)

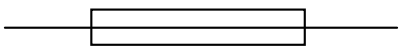
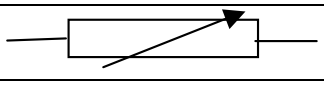
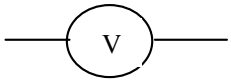
2. Match the correct unit to the quantities listed

Quantity	Unit
1. Charge	a. ampere
2. Current	b. coulomb
3. Voltage	c. second
4. Time	d. volt

Q	U
1.	
2.	
3.	
4.	

(4)

3. Complete the following table of components and their symbols,

Component	**Symbol**
Battery	
	
Lamp	
Resistor	
	
Diode	
	
	
Ammeter	
Switch	

(10)

5. Calculate the amount of electric charge which passes through an ammeter in a time of 6 seconds if it reads 1.8 A

Working

(3)

20

S.G. Physics Homework 3 After Activity 15 Using Electricity Unit

Name _____ **Class** _____ **Date Due** _____

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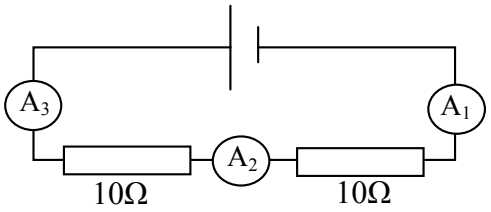
1. If the reading on A_1 is 0.5 A, what is the reading on A_2?



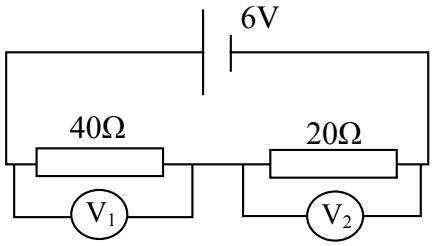
_____

What is the reading on A_3?

_____

(2)

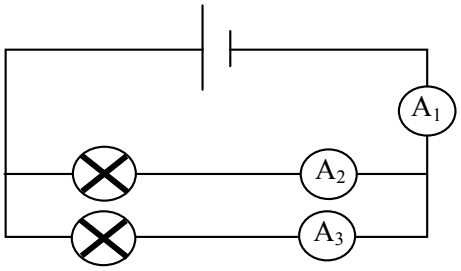
2. If the reading on V_1 is 2 V, what is the reading on V_2 ?



_____

(1)

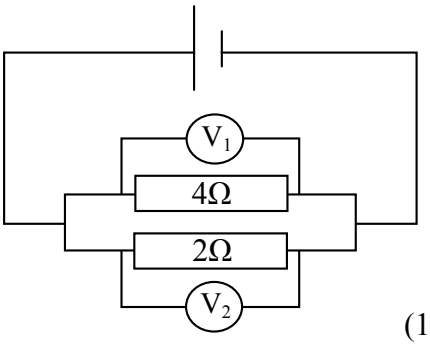
3. If A_2 reads 0.3 A and A_3 reads 0.5 A, what is the reading on A_1?



_____

(1)

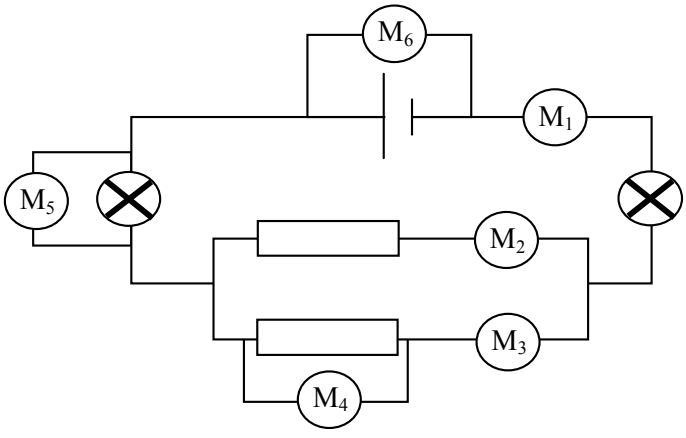
4. If V_1 reads 3 V what is the reading on V_2?



_____

(1)

5. In the following circuit decide for each meter whether it is a voltmeter or an ammeter,



M1 _____

M2 _____

M3 _____

M4 _____

M5 _____

M6 _____

(6)

/11

S.G. Physics Homework 4 After Activity 24 Using Electricity Unit

Name _____ **Class** _____ **Date Due** _____

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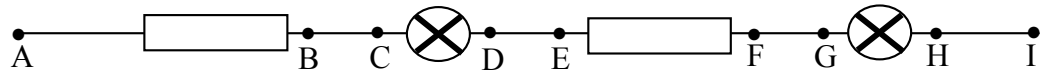
1. An ohmmeter is connected across each of the sections in turn of the following arrangement,

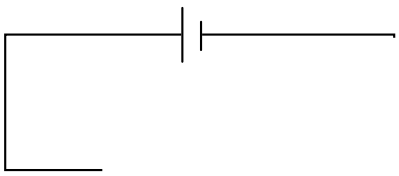


The following table gives the readings on the meter for each section. Complete the table by stating whether there is "no fault", "short circuit" or "open circuit" for that section.

Section	**Reading (Ω)**	**Fault**
AB	100	_____
BC	0.01	_____
CD	1M (off scale)	_____
DE	0.01	_____
EF	50	_____
FG	1M (off scale)	_____
GH	1.5	_____
HI	0.01	_____

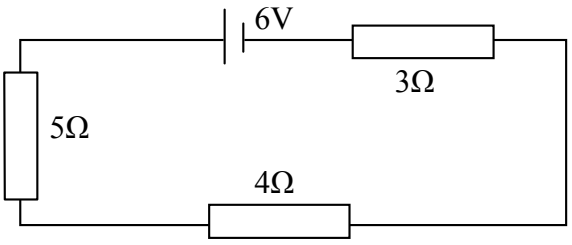
(8)

2. To the following diagram add two switches and two bulbs so that one of the switches acts as a main switch and also so that one of the bulbs can be switched off while the other is still on.



(4)

3. (a) What is the total resistance of the following circuit?



Working

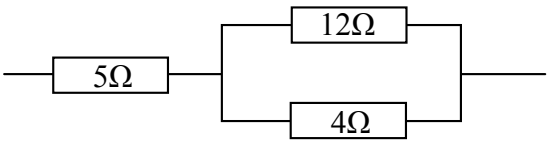
(2)

(b) What value of current flows in the circuit?

Working

(2)

4. Find the total resistance of the following arrangement of resistors,



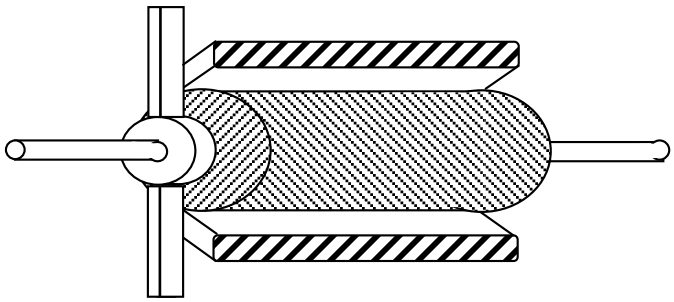
Working

(3)

S.G. Physics Homework 5 After Activity 40 Using Electricity Unit

Name _____ **Class** _____ **Date Due** _____

1. Label the following diagram of a motor using,
rotating coil, brushes, commutator, field coil



(4)

2. A hillwalker discovers that her compass points slightly away from North when she switches on a torch lying beside the compass. Explain why this happens.

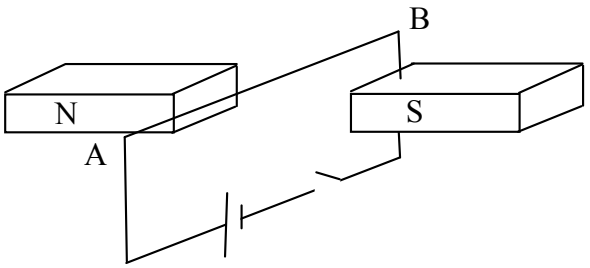
_____

_____

_____

_____ (3)

3. (a) What happens to the piece of wire between the poles of the magnet when the switch is closed?



_____

_____

(b) What would be the effect then of changing round the positions of the North and South poles

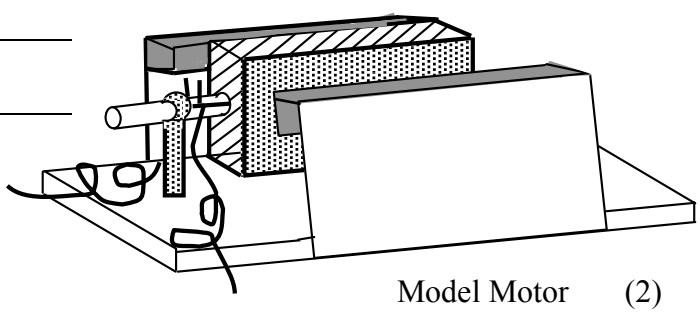
_____

_____ (2)

4. State two differences between commercial motors (such as those used in washing machines, vacuum cleaners etc.)

(a) _____

(b) _____



Model Motor (2)