

RAINBOW INTERNATIONAL SCHOOL,

RIYADH, SAUDI ARABIA

GRADE 6- SCIENCE – Revision sheet.

Chapter 4: Forces and Motion

4.1 Mass and Weight

I. Fill in the blanks:

- a) Mass is the amount of _____ contained in an object.
- b) Mass is measured in _____
- c) On the earth mass of an object is the _____ as its weight
- d) Weight is defined as the amount of _____ force acting on an object
- e) Weight changes because of _____
- f) There is no force of gravity in _____
- g) Astronauts float in the space due to _____
- h) Weight is measured in _____
- i) An object weighs _____ at sea level than that at top of a mountain

II. Answer the following;

1. Define mass:

2. Define weight

3. a) Describe what will happen to mass and weight when you go to the moon?

b) Why would this happen?

4. What are the two things on which gravity depends?

4.2,4.4: How forces act and the effect of forces:

I. Fill in the blanks;

1. Any push or pull: _____

2. _____ show the direction and sizes of forces

3. Force always acts in _____

4. Force can be measured by using a _____

5. The unit to measure force _____

II. Answer the following:

1) What is a force?

2) Name some effects of forces:

4.3 Balanced and unbalanced forces:

I. Fill in the blanks:

a) A _____ force always causes a change in _____

b) When the forces are _____ the object does not move.

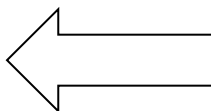
c) If the net force on an object is not zero, then the forces are _____

d) When the forces are in the _____ direction, the net force is
the difference between the forces

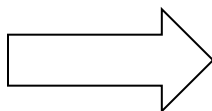
II. Answer the following;

1) What is the net force?

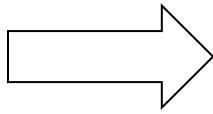
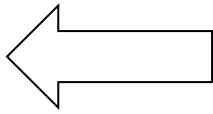
30N



20N



2) 5N 5N



3) a) Is this force balanced or unbalanced? Give reason.

4.6 Friction:

I. Fill in the blanks:

- a) Vehicles can move on the roads because of _____ between the tyre and the road surface
- b) _____ are used to reduce friction in Mechanics
- c) Friction makes things _____
- d) Friction produce _____ energy

II. Give one word reason:

- a) Is friction a contractor non-contact force?

- b) The smoother a surface is the _____ will be the friction

III. Answer the following;

1. a) What is friction?

b) How friction is useful?

c) How can we reduce friction?

d) What are the harmful effects of friction?

e) How can we reduce friction?

4.8 Air resistance and drag:

I. Fill in the blanks:

1) The frictional force which is acting on an object when it moves through air is called:_____

2) Air resistance is an _____force which is -exerted against a falling object.

3) Answer the following:

i) What factors affect air resistance?

ii) a) What direction do the forces of air resistance and gravity act on a falling object?

b) If a sky diver jumps out of a plane which force is greater? Gravity or air resistance?

4) Why does a feather fall slower than a tennis ball?

1. Name the following:

- i) A force that tries to slow things down when two things rub together

- ii) force that tries to slow things that are moving through air.....

- iii) When two forces working in opposite directions are not the same strength.....

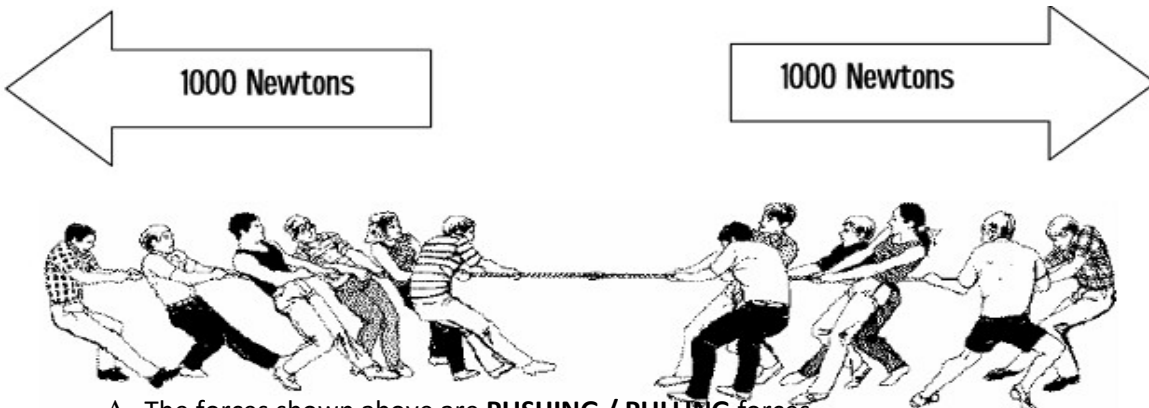
- iv) The amount of force on something from gravity .It is measured in Newtons.

- v) unit of force(N).....

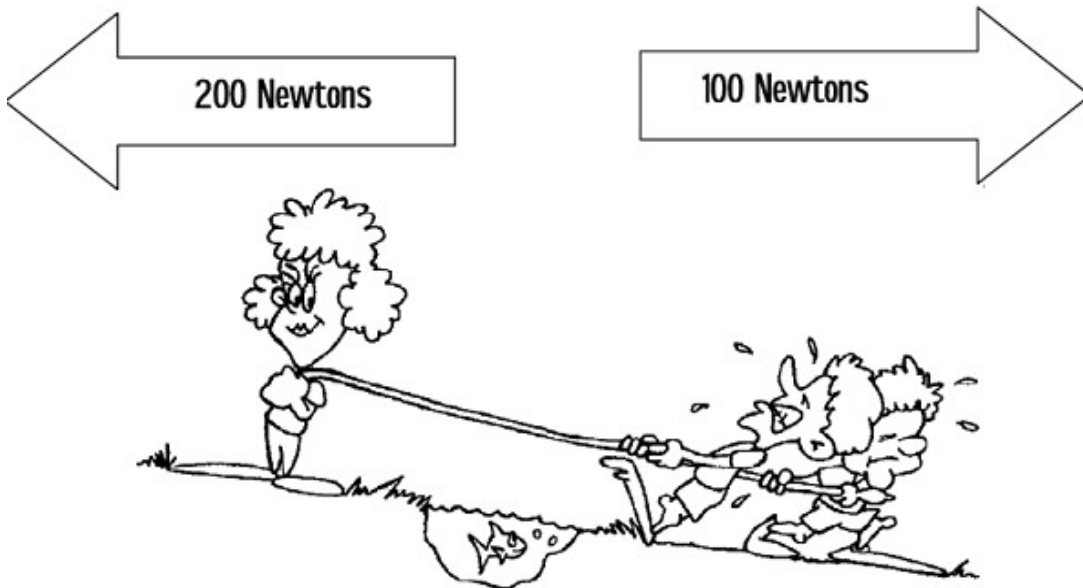
- vi) push or a pull.....

- vii) A piece of equipment containing a spring that is used to measure forces.....

2. Circle the best answer:



- A. The forces shown above are **PUSHING / PULLING** forces.
- B. The forces shown above are **WORKING TOGETHER / OPPOSITE FORCES**.
- C. The forces are **EQUAL / NOT EQUAL**.
- D. The forces **DO / DO NOT** balance each other.
- E. The resultant force is **1000 N TO THE RIGHT / 1000 N TO THE LEFT /ZERO**.
- F. There **IS / IS NO** motion.



3 ..

- A. The forces shown above are **PUSHING / PULLING** forces.
- B. The forces shown above are **WORKING TOGETHER / OPPOSITE FORCES**.
- C. The forces are **EQUAL / NOT EQUAL**.
- D. The forces **DO / DO NOT** balance each other.
- E. The stronger force is pulling to the **RIGHT / LEFT**.
- F. The weaker force is pulling to the **RIGHT / LEFT**.
- G. Motion is to the **RIGHT / LEFT**.

Circle the best answer on the line provided. _____

4..i. When forces are balanced, the total force -----

- a. is greater than the sum of the forces
- b. is zero
- c. is negative
- d. is equal to the largest force

ii . A force is which one of these?

- a. a push
- b. a push or pull
- c. a pull
- d. none of these

iii. Force is measured in which units?

- a. kilograms
- b. newtons
- c. degrees
- d. m/s²

5..Give **two** examples of a **pushing** force **AND** **two** examples of a **pulling** force:

Pushing Force

Pulling Force

1- _____

1- _____

Chapter 5

Electrical Conductors and Insulators

5.1

I. Fill in the blanks:

1. _____ is a poor conductor of electricity
2. Metals are electrical _____
3. Non-metals are _____
4. The outer layer of plastic is an _____

II. Answer the following;

1. a) Differentiate conductors and insulators with two examples each;

-
- b) Why is copper used for making electric wires?

-
-
2. Give reason

-
-
-
- a) Why electric wires have plastic covering?

-
-
-
-
- b) A metal spoon becomes warm when it is used to stir warm objects.

5.2

I. Fill in the blanks;

1. Pure water is a bad conductor of _____

2. _____ water can conduct electricity

3. Answer;

Does pure water conduct electricity? If not, how can we achieve to conduct electricity through pure water?

II. Give reasons;

Tap water is a good conductor of electricity whereas distilled water is not.

III. State whether true or false:

1. Rubber is a good conductor of electricity: _____

2. Plastics are poor conductor of electricity: _____

3. All liquids conduct electricity: _____

4. Pure water conducts electricity: _____

5. Distilled water is free of salts: _____

6. Distilled water when mixed with salt conducts electricity: _____

5.3

I. Answer the following;

1. a) What is current?

b). How do we measure current?

c). What is the unit of current?

d) . Name instrument used to measure current?

2. What is an alloy? Give two examples.

3. a) Do all metals conduct electricity?

b) Why do some metals conduct electricity better than others?

c) Which metals conduct electricity best?

5.4

I. Give reasons;

1. Metals are used for the pin in a plug:

2. A plug has a plastic cover

3. You can get a shock if you touch the live wires

4. Never place an electric wire under a carpet

5. Turn off the switch before you pull out the plug.

Q.1 Choose the best answer.

1. In a simple series circuit, the bulb lights up when the switch is turned on because:
 - A. the switch produces electricity
 - B. the gap in the circuit is closed
 - C. the switch breaks the circuit
 - D. the circuit is open

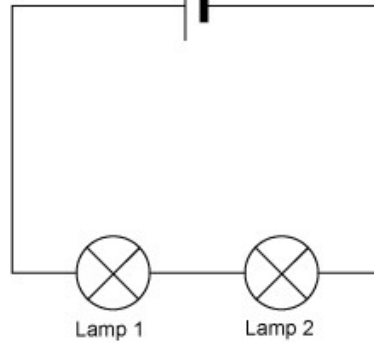
2. Imagine a simple series circuit with one 1.5V battery and one bulb. When the 1.5V battery is replaced with a 3V battery:
 - A. the bulb gets brighter
 - B. the bulb gets dimmer
 - C. the bulb stays at the same level of brightness
 - D. the brightness of the bulb decreases

3. Why might a bulb burn out when a 1.5V battery and a 3V battery are both connected across it in series circuit?
 - A. There is not enough electricity flowing around the circuit
 - B. Too much electricity flows through the bulb's filament and the bulb blows
 - C. The batteries are flat
 - D. There is not enough current in the circuit

4. What is the effect of changing the wire in a circuit from a straight thick wire to a straight thin wire?
 - A. The bulbs become dimmer
 - B. The bulbs become brighter
 - C. The bulbs stay at the same level of brightness
 - D. The bulbs burn out

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

- A. it will get brighter
- B. it will keep on working
- C. it will burn out
- D. it will get dimmer



Q.2 Answer the following questions.

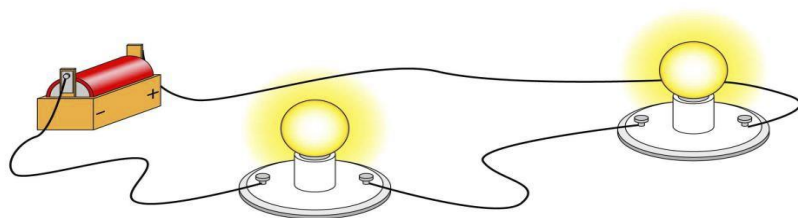
- a. Will a thicker or thinner copper wire of the same length allow more electric current to pass through?

- b. The handles of screwdrivers and pliers used by electrician for repair have plastic or rubber covering.

- c. Will a copper or Aluminum wire of the same length and thickness allow more electric current to pass through?

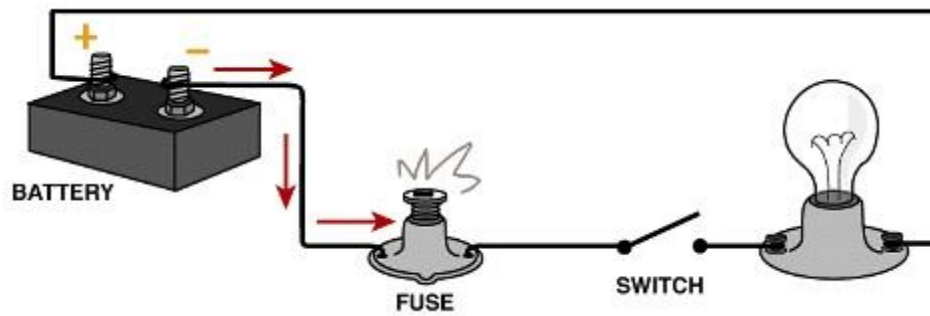
Q.3 Identify the factors that affect the brightness of the bulb(s) in a circuit.

Q.4a Draw a circuit diagram for the electric circuit below.



b. If a light bulb is missing or broken in a parallel circuit, will the other bulb light? Explain.

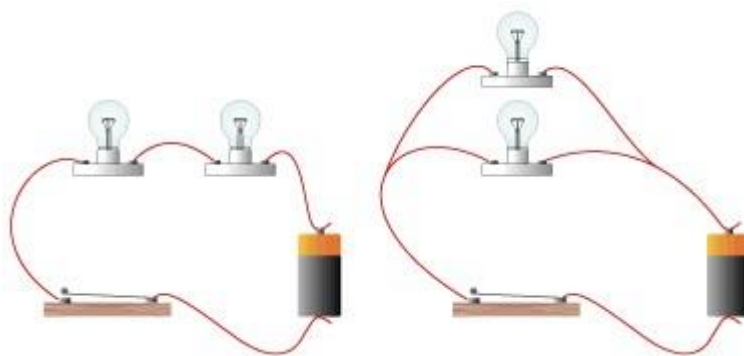
Q.5 Will the bulb glow in the circuit drawn below? Explain your answer.



Q.6 Complete the table below.

Electrical component	Name of component	Symbol	Function

Q.7 Look at the circuits given below and answer the questions.



Circuit A

Circuit B

a) Identify:

I. Circuit A: _____

II. Circuit B: _____

b) Draw a circuit diagram for Circuit “A ” and “B” below;

c) Which circuit will have brighter bulbs? Explain
