MAHA BODHI SCHOOL
2024 SCIENCE REVIEW 2
PRIMARY FOUR

Name : _____( ) Date : 21 August 2024

Class : Primary 4 _____

Duration : 40 min **Marks:** / 30

Parent's signature : _____

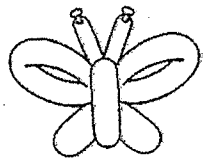
Section A : [8 x 2 marks = 16 marks]
For each question from 1 to 8, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Write your answer in the bracket.**

1. Which of the following is not a matter?

(1) Air
(2) Light
(3) Sand
(4) Water

( )

2. During a birthday party, a clown fills a balloon with air. He then twists and squeezes it until it is shaped like a butterfly as shown below.



Which property of air allows the clown to change the shape of the balloon?

(1) Air has mass.
(2) Air is a matter.
(3) Air has no fixed volume.
(4) Air does not occupy space.

( )

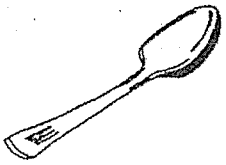
Marks: / 4

3. Which of the following is a source of light?

(1) 
moon

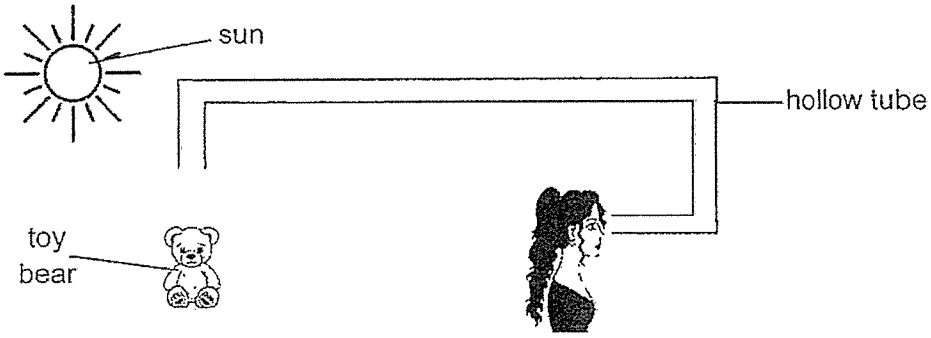
(2) 
fire

(3) 
toy

(4) 
metal spoon

( )

4. Study the diagram below.



Sarah was not able to see the toy bear through the hollow tube as

_____

(1) light travels in a straight line

(2) light cannot reflect off the toy bear

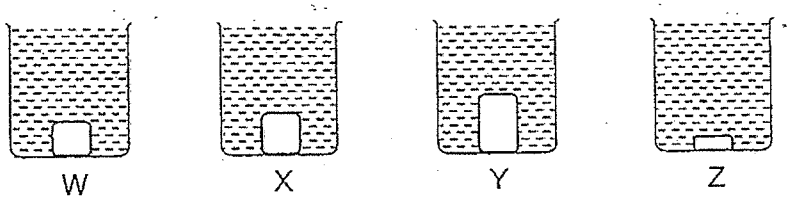
(3) the toy bear is not a source of light

(4) the toy bear does not allow light to pass through

( )

Marks: / 4

5. The diagram below shows four solids of same thickness, but different heights placed into four identical beakers, W, X, Y and Z. All four beakers were then filled with water to the brim.

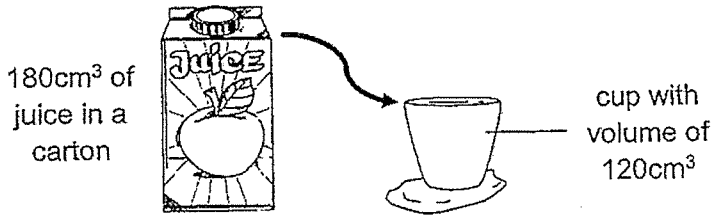


Arrange the beakers starting from the one that contains the least amount of water to the one that contains the most amount of water.

	Least water → Most water			
(1)	X	Y	W	Z
(2)	Z	W	X	Y
(3)	Y	X	W	Z
(4)	Y	W	Z	X

( )

6. Melvin poured 180 cm^3 of juice from a carton into a cup as shown. He observed that the cup was completely filled and some juice overflowed.



What can he conclude from his observation?

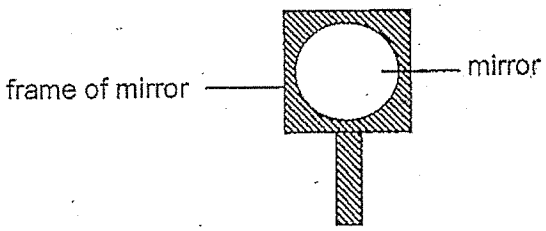
A. The juice can be compressed.
B. The juice occupies space.
C. The cup has a definite volume but not the juice.
D. The juice in the cup has a definite shape but not the juice in the carton.

(1) B only
(2) A and C only
(3) B and D only
(4) A, C and D only

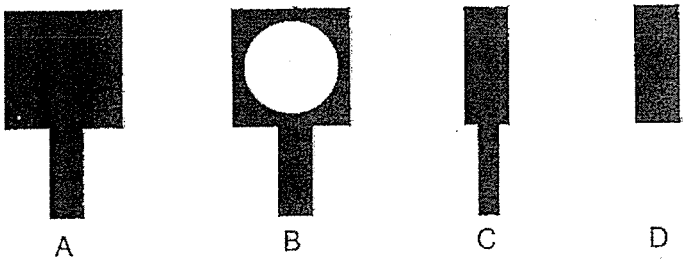
( )

Marks: / 4

7. The diagram shows a handheld mirror.



Which of the following is/are the possible shadow(s) formed by the handheld mirror?



(1) A and B only

(2) B and C only

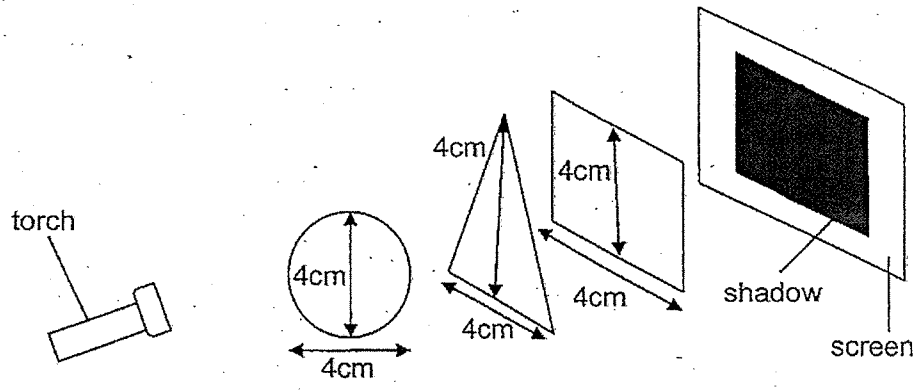
(3) C and D only

(4) A, C and D only

( )

Marks: / 2

8. Dan arranged 3 objects of different shapes and materials, E, F and G, in a straight line in front of a blank screen. He then shone a torch as shown in the set-up below. The shadow formed on the screen is shown below.



Which of the following about the objects E, F and G is most likely correct?

	E	F	G
(1)	No light could pass through	Most light could pass through	Some light could pass through
(2)	Some light could pass through	No light could pass through	Some light could pass through
(3)	Most light could pass through	No light could pass through	No light could pass through
(4)	Most light could pass through	Most light could pass through	No light could pass through

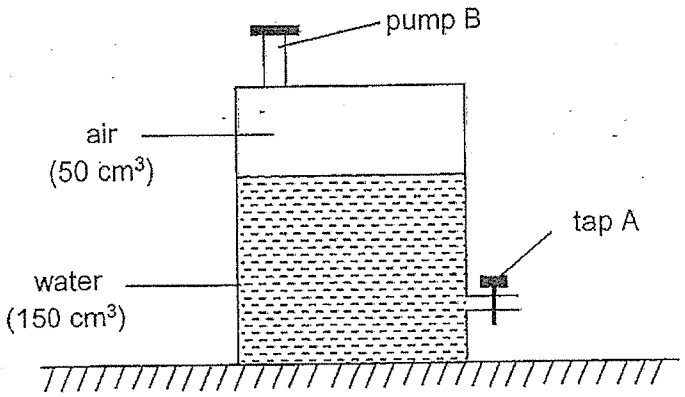
( )

Marks: / 2

SECTION B : [14 marks]
For questions 9 to 12, write your answers in this booklet.

The number of marks available is shown in the brackets [ ] at the end of each question or part-question.

9. Stacy set up an experiment using a sealed glass container which holds 150 cm^3 of water and 50 cm^3 of air as shown below.



(a) She removed 20 cm^3 of water from the container through tap A and pumped in 50 cm^3 of air using pump B.

State the final volume of air and water in the container in the table below. [2]

(i) Volume of air : _____

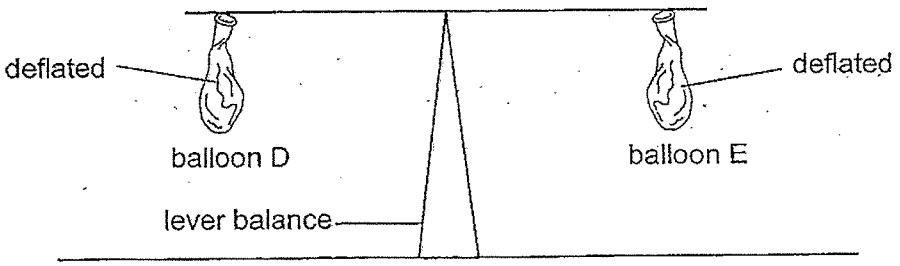
(ii) Volume of water : _____

(b) Based on the above experiment, state one property of air. [1]

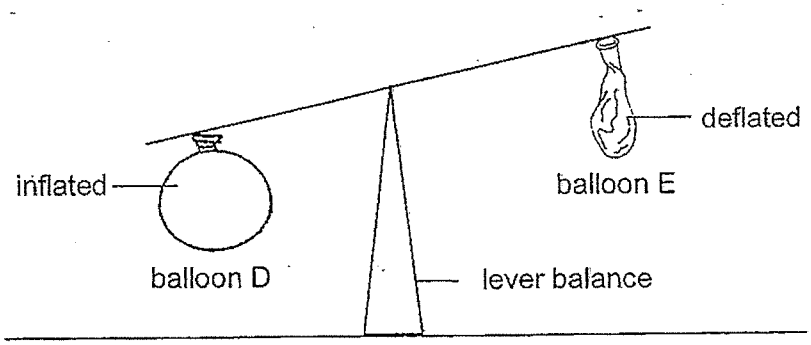
_____

Marks: / 3

10. Ben set up the following experiment.



He then filled balloon D with air as shown below.

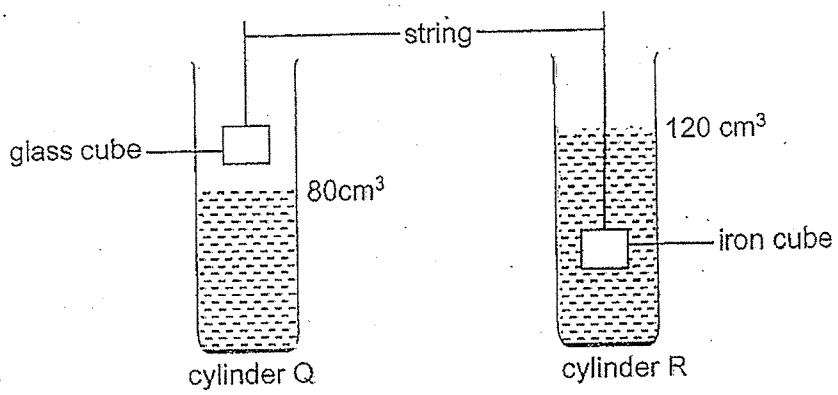


(a) Ben observed that the lever balance tilted down towards balloon D. Based on this observation, what can Ben conclude about air? [1]

(b) State the other property that air must possess to be considered as matter. [1]

Marks: / 2

(c) In another experiment, Ben poured 80 cm^3 of water into each measuring cylinder. He lowered an iron cube into cylinder R until it reached the bottom of the cylinder. He repeated the steps with a glass cube. Both the iron and glass cubes have the same volume.



He recorded the water level in the table below.

	Water level (cm^3)	
	Before the cube was lowered into cylinder.	After the cube was lowered into cylinder.
Cylinder Q	80	_____
Cylinder R	80	120

(i) What would the water level be in cylinder Q after the glass cube was lowered inside? Write your answer in the table above. [1]

(ii) The glass cube was then removed from cylinder Q and cut into 8 smaller pieces. All the pieces of the glass cube were then placed back into the cylinder.

How would the water level in cylinder Q change after the 8 smaller pieces of the glass cube were placed in?
Explain your answer. [1]

_____

_____

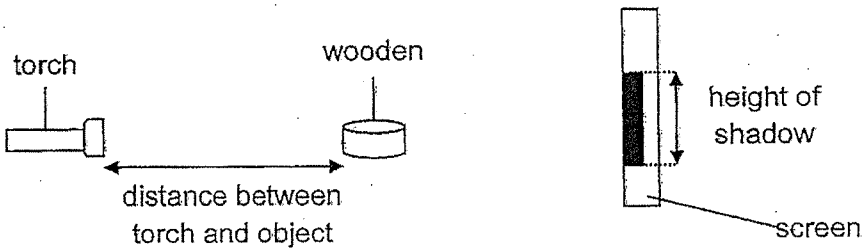
Marks : / 2

11. (a) State how a shadow is formed. [1]

_____

_____

(b) James wanted to find out how the distance between a light source and an object affects the height of the shadow formed. He used the set-up shown below.



The results of the experiment are shown in the table below.

Distance between torch and object (cm)	Height of shadow formed (cm)
4	14
8	10
12	?
16	6

(b) State the possible height of the shadow formed when the distance between the torch and the wooden object is 12 cm. [1]

The height of the shadow is _____ cm.

(c) Based on the results above, state the relationship between the distance of the torch and the object and the height of the shadow formed. [1]

_____

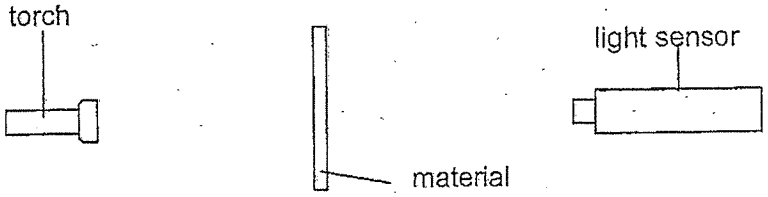
_____

(d) Without changing the distance between the torch and the object, state another way the shadow formed in the experiment can be smaller. [1]

_____

Marks : / 4

12. Belle conducted an experiment in a dark room to find out how much light can pass through three types of materials W, X, and Y.



She shone light at the materials and recorded her results in the table below.

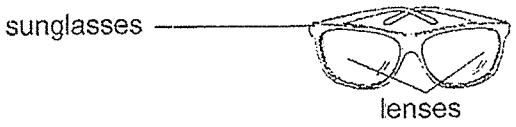
Type of material	Amount of light (units)
No material present	100
W	100
X	40
Y	0

(a) State the reason why the experiment was conducted in a dark room. [1]

_____

_____

(b) Study the pair of sunglasses below. It is worn to protect the eyes of the user from bright light.



(i) Based on the results in the table above, which material W, X or Y would be suitable to make the lenses of the pair of sunglasses to be used on a bright, sunny day? [1]

Material _____

(ii) State the reason for your choice in b(i). [1]

_____

_____

Marks : / 3

~ END OF PAPER ~

YEAR : 2024
LEVEL : PRIMARY 4
SCHOOL : MAHA BODHI SCOOL
SUBJECT : SCIENCE
TERM : REVIEW 2

Q1	2	Q2	3	Q3	2	Q4	1
Q5	3	Q6	1	Q7	4	Q8	4

Q9	a)(i)70cm^3 (ii)130cm^3 b) Air can be compressed.
Q10	a) He can conclude that air has mass b) Air must take up space to be considered as matter. c) (i) 120 (ii) The water level will not change as the glass cube is a solid and solids have a definite volume.
Q11	a) A shadow is formed when light is partially or fully blocked. b) 8 c) The further away the wooden object is to the torch , the shorter the shadow. d) The screen can be moved towards the wooden object to form a smaller shadow.
Q12	a) To make sure that the surrounding light would not affect the results. b) (i) X (ii)Material X allows only some light to pass through it.

END