METHODIST GIRLS' SCHOOL
Founded in 1887

PRIMARY 4
SCIENCE
WEIGHTED ASSESSMENT 2 2023

Total Time for Paper: 45 min

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.

Name: _____ ( )

Class: Primary 4 _____

Date : _____

Parent's signature: _____

Section A	18
Section B	12
Total	30

This paper consists of 11 printed pages including this page.

Section A

For each question from 1 to 9, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write in the bracket provided. [18 marks]

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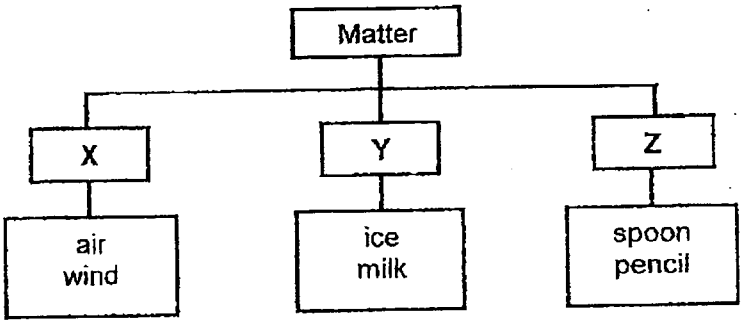
1 Which of the following is matter?

A Oil
B Music
C Cloud
D Shadow

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

( )

2 The classification chart below shows how different states of matter are grouped.



Which of the following is **wrongly** grouped?

(1) Ice
(2) Milk
(3) Wind
(4) Spoon

( )

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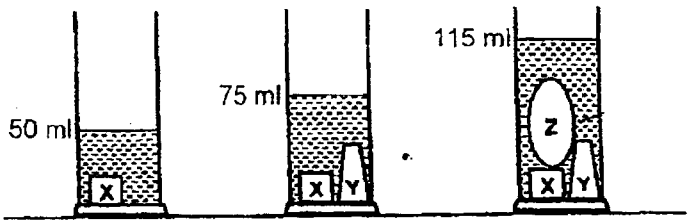
3 Tom placed object X into a measuring cylinder. He then added some water and placed objects Y and Z into the measuring cylinder, as shown below.

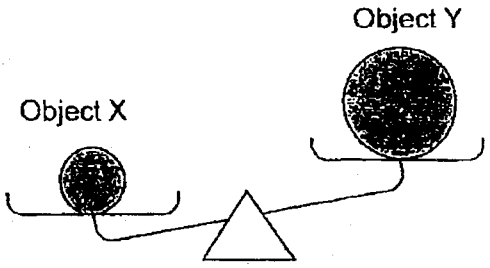


Based only on the information above, which of the following statements are true?

A Tom can find the volume of water.
B Tom can find the volume of object X.
C Tom can find the volume of object Y.
D Tom can find the volume of object Z.

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

4 Two objects made of the same material, X and Y, are placed on a lever balance as shown below.



Which of the following statements are true?

A Object X has a smaller mass than object Y.
B Object Y has a smaller mass than object X.
C Object X has a greater volume than object Y.
D Object Y has a greater volume than object X.

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

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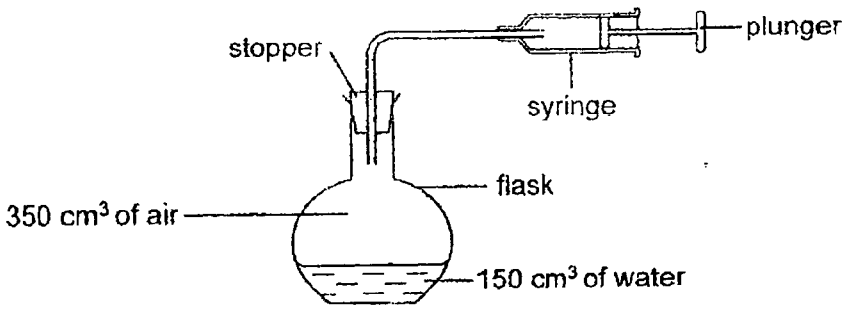
5 Study the set-up. The volume of the flask in the set-up below is 500 cm^3.

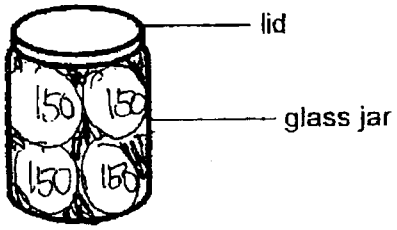


Using the syringe, 50 cm^3 of water and 100 cm^3 of air are added into the flask. What would be the final volume of air in the flask?

(1) 200 cm^3
(2) 300 cm^3
(3) 350 cm^3
(4) 450 cm^3

( )

6 The diagram below shows a glass jar with a volume of 600 cm^3.



Which of the following can occupy the space in the glass jar with the lid on?

P Pour in 580 cm^3 of water
Q Pump in 650 cm^3 of oxygen
R Put in four wooden balls each with a volume of 150 cm^3

(1) P and Q only
(2) P and R only
(3) Q and R only
(4) P, Q and R

( )

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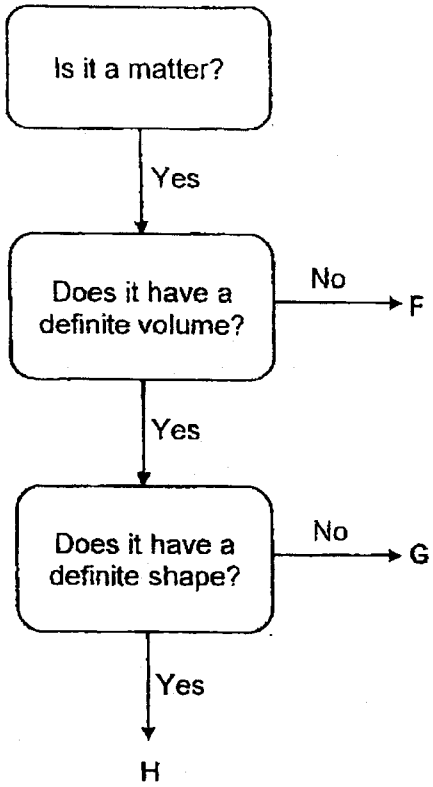
7 Study the flow chart below.



Which of the following correctly represents F, G and H?

	F	G	H
(1)	juice	air	marble
(2)	marble	juice	air
(3)	air	juice	marble
(4)	air	marble	juice

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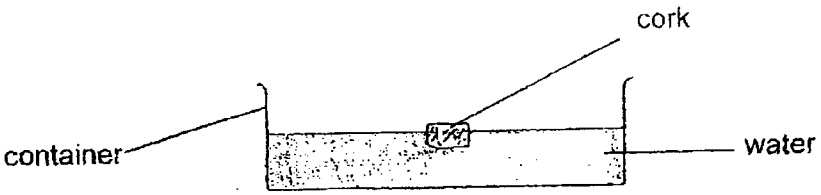
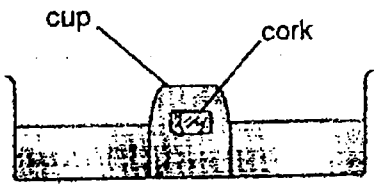
8 Bob filled a container with water and placed a piece of cork on the water as shown below.

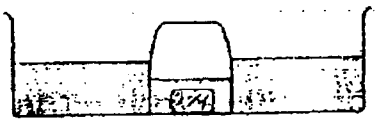


Which one of the following shows the most likely observation when he inverted an empty glass over the cork?

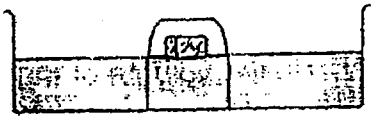
(1)



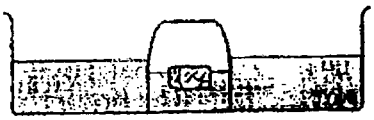
(2)



(3)



(4)



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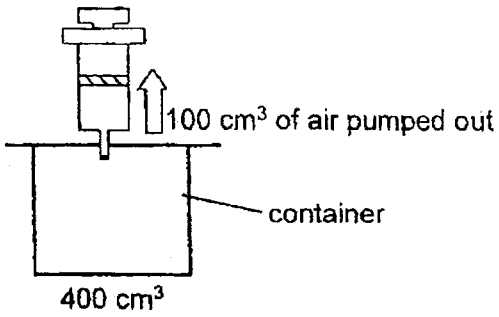
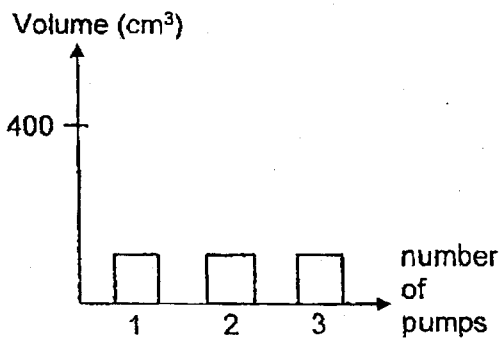
9 Study the set-up below. The volume of the container is 400 cm^3. 100 cm^3 of air can be pumped out of the container each time.

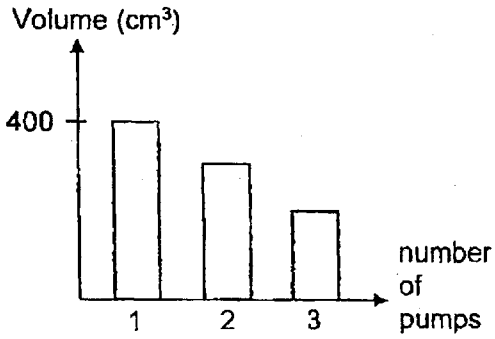


Which bar graph correctly shows the volume of air in the container if the air was pumped out of the container for three times?

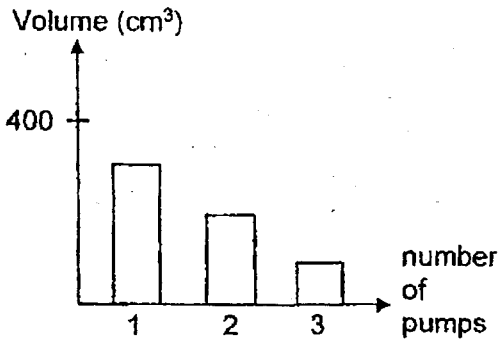
(1)



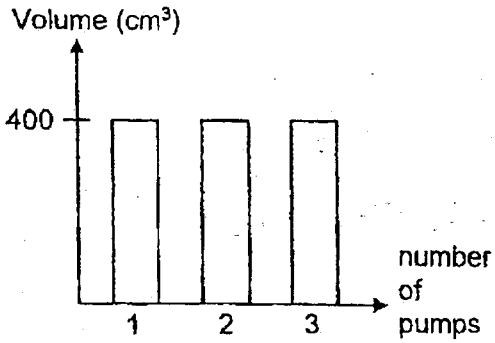
(2)



(3)



(4)



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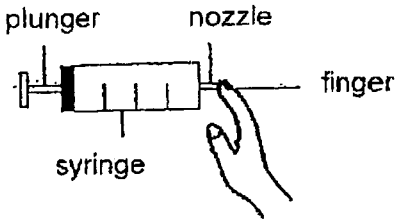
Section B

For questions 10 to 13, write your answers in the space provided. [12 marks]

10 Fatimah put substance P into the syringe and observed whether the plunger could be pushed in when one end of the syringe is covered with her finger, as shown in the diagram below. She then repeated the experiment with substance Q which takes the shape of the syringe.



The plunger could be pushed in easily for substance P but could not be pushed in at all for substance Q.

(a) Identify the states of matter for substances P and Q respectively. [1]

Substance P: _____

Substance Q: _____

(b) Explain your answer in (a). [1]

_____

_____

_____

2

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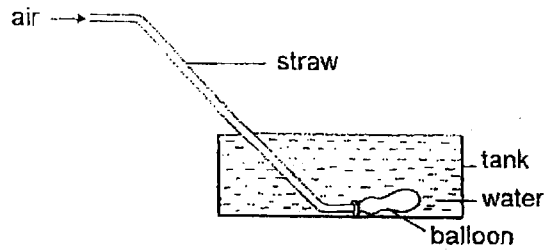
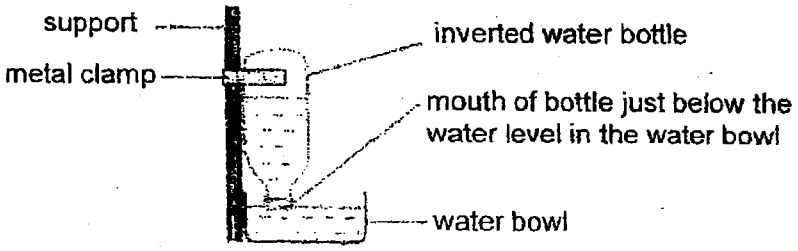
11 Joshua set up an experiment as shown in the diagram below. He filled the tank with water to the brim. Then, he blew air through the straw into the balloon.



(a) What would happen to the water in the container after he blew air into the straw? Explain your answer [2]

In another experiment, Joshua used a bottle to build a self-filling water bottle for his pet dog. He filled the bottle with water and inverted the bottle over a water bowl as shown below. The water will only flow out of the bottle when the water level in the water bowl decreases.



(b) Explain why the water does not flow out of the bottle when the mouth of the bottle is below the water level in the water bowl and will only flow out of the bottle when the water level in the water bowl decreases. [2]

4

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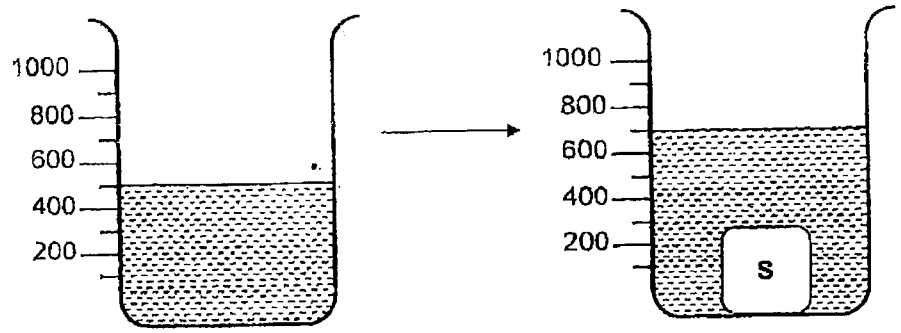
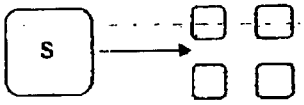
12 Mrs Lee filled a beaker with 500 cm^3 of water and lowered solid S carefully into it as shown below.



(a) What is the volume of solid S? [1]

_____ cm^3

Mrs Lee removed solid S from the beaker and broke it up completely into 4 equal smaller cubes as shown below.

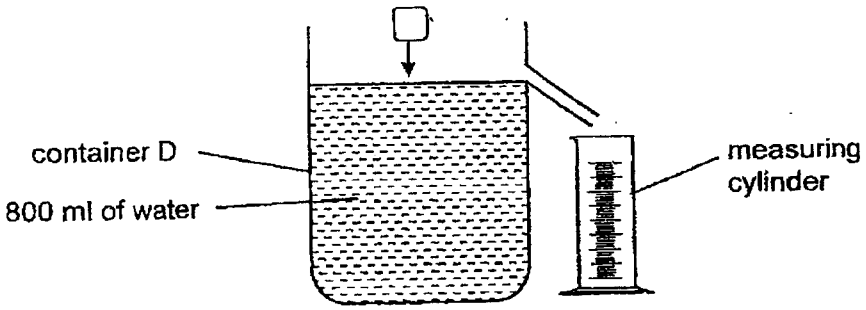


(b) She then placed all the 4 smaller cubes back into the same beaker with 500 cm^3 of water. What will be the total volume of 4 smaller cubes and water? [2]
Which property of solid is shown?

_____

_____

Mrs Lee filled up container D with 800 ml of water as shown below. She then gently lowered **one of the smaller cubes** from solid S to the bottom of container D.



(c) What will be the volume of water collected in the measuring cylinder? [1]

_____ ml

4

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13 Karen covered the opening at C of the communicating vessel with a rubber stopper. She poured 300 ml of water into the opening at A as shown in diagram 1 below.

Karen then placed a rubber ball into the communicating vessel as shown in diagram 2.

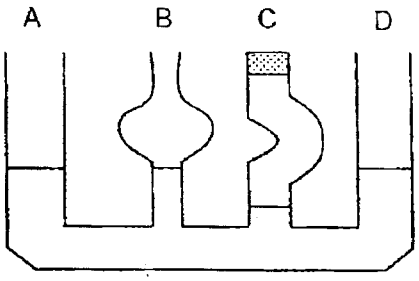


Diagram 1

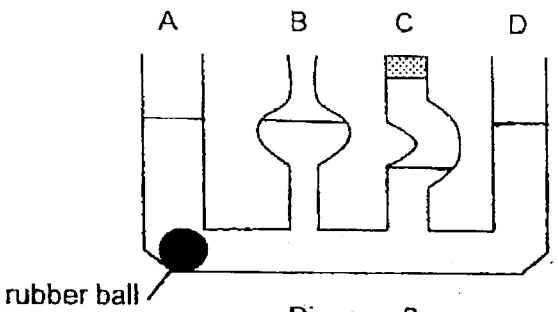
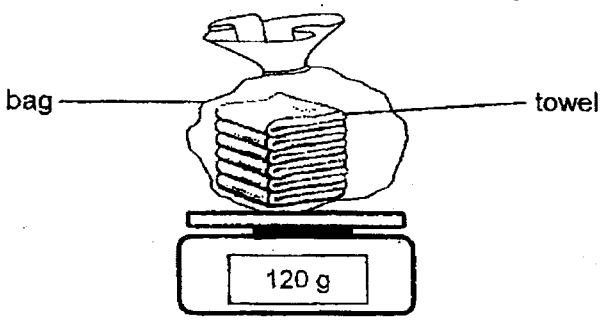


Diagram 2

(a) Draw the correct water levels for A, B, C and D in diagram 2 above after the rubber ball was placed into the communicating vessel. [1]

(b) Next, Karen packed six towels in a bag and placed them on an electronic balance as shown below. She observed that the mass of the six towels with the bag was 120g.



(c) She concluded that the mass of each towel was 20g.
Based on the measurements, give a reason why her conclusion was not correct. [1]

_____

_____

_____

2

End of paper

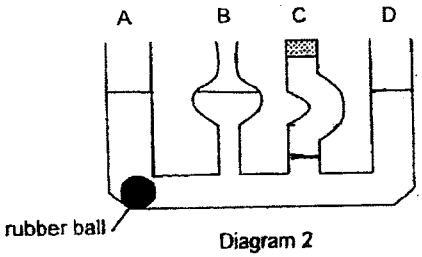
SCHOOL : METHODIST GIRLS' SCHOOL
LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : 2023 WA 2

CONTACT :

SECTION A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	
2	1	1	4	2	1	3	4	4	

SECTION B

Q10)	a) Substance P: Gaseous Substance Q: Liquid b) Matter in the gaseous state can be compressed but matter in liquid state cannot be compressed
Q11)	a) Water in the container would overflow. Air does not have a definite volume, so balloon will expand and occupy a larger area hence displacing the water and causing it to overflow. b) Water has a definite volume and cannot be compressed, so the water in the bottle cannot overflow into the water bowl as the water in the bow is occupying space.
Q12)	a) 200cm^3 b) The total volume of 4 smaller cubes and water will be 700cm^3. The property of solids shown is solids have definite volume c) 50ml
Q13)	 Diagram 2 a) b) 120g is the mass of the towels and the bag because the towels were in the bag when Karen measured them.