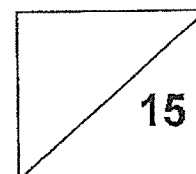




Anglo-Chinese School  
(Primary)  
A Methodist Institution  
(Founded 1886)



## 2024 P4 Science Weighted Assessment 3

Name: \_\_\_\_\_ (       )      Date: 24 July 2024

Class: P4 \_\_\_\_\_      Duration: 25 minutes

### Section A: Investigation

#### Instructions for Performance Task (5 marks)

Read the questions carefully before you begin.

#### **Aims:**

1. To take measurements of different objects for comparison.
2. To observe interactions between different objects.
3. To classify objects based on results.

#### **Materials:**

- Objects S, T and U
- 1 ruler
- 1 magnet (**Do not drop!**)



**Procedure:**

*Taking measurements*

1. Use the ruler to measure the **length** of objects, **S**, **T** and **U**.

2. Record the **length** of each object in the table below.

[3]

| Object | Length of object (cm) |
|--------|-----------------------|
| S      |                       |
| T      |                       |
| U      |                       |

*Observing interactions and classifying objects*

3. Use the magnet to touch each object, **S**, **T** and **U**, and observe if the magnet attracts the object.

4. Based on your results in the table above, group each object, **S**, **T** and **U**, under the correct heading below.

[2]

[Use the letters, **S**, **T** and **U**, only.]

| Magnetic | Non-magnetic | Not possible to tell |
|----------|--------------|----------------------|
|          |              |                      |

**Note: Return all the items to the bag.**

## Optical Answer Sheet

|   |
|---|
| 2 |
| 3 |
| 4 |

### Section B: Knowledge Application (Multiple-Choice Questions)

For each question from 2 to 4, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet. [6]

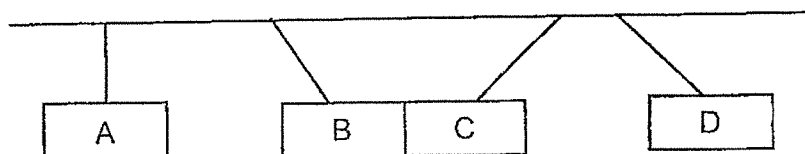
- 2 The table below describes three different states of matter, J, K and L.

| Property                        | J   | K  | L   |
|---------------------------------|-----|----|-----|
| Does it have a definite shape?  | Yes | No | No  |
| Does it have a definite volume? | Yes | No | Yes |

Based on the table above, which of the following is correct?

|     | J     | K      | L      |
|-----|-------|--------|--------|
| (1) | solid | liquid | gas    |
| (2) | solid | gas    | liquid |
| (3) | gas   | solid  | liquid |
| (4) | gas   | liquid | solid  |

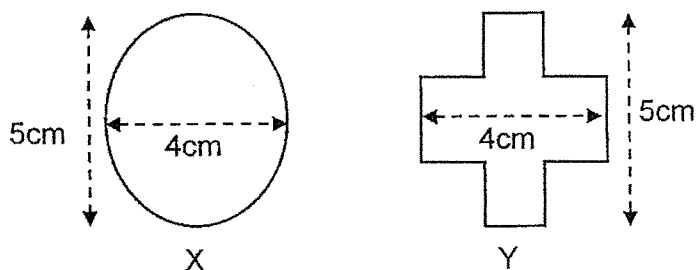
- 3 The diagram below shows what happens when four metal bars of the same weight, A, B, C and D, are suspended on strings.



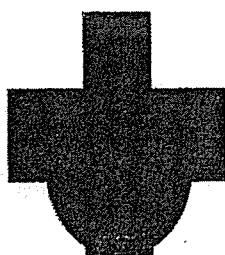
Based only on the diagram above, which of the following is **definitely** correct?

- (1) D is a magnet.
- (2) Both B and C are magnets.
- (3) A is not made of a magnetic material.
- (4) Both A and D are not magnetic materials.

- 4 The diagram below shows two objects, X and Y.

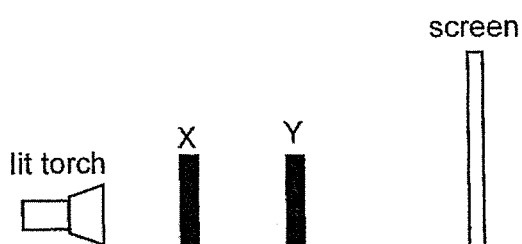


The two objects were arranged in a set-up such that the following shadow was seen on the screen.

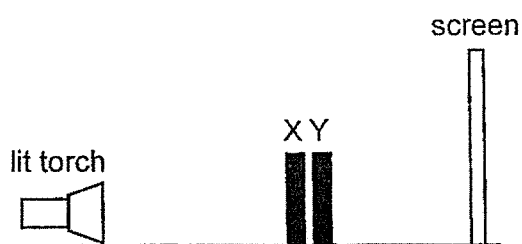


Which one of the following correctly shows where X and Y were placed between the lit torch and the screen?

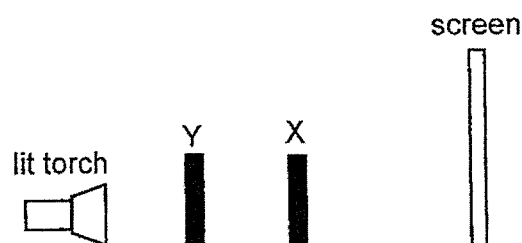
(1)



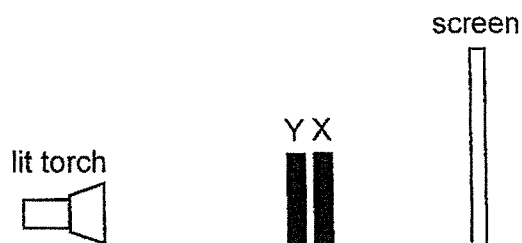
(2)



(3)



(4)

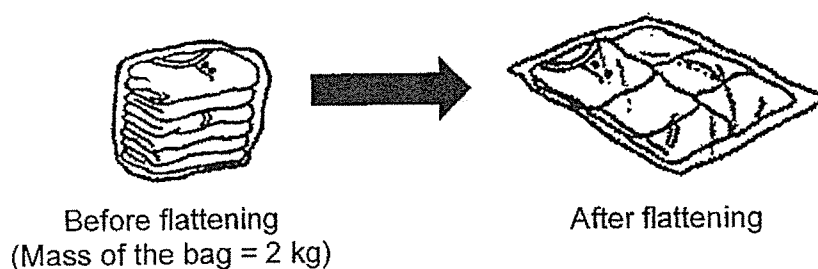


**Section C: Knowledge Application (Open-Ended Questions)**

For questions 5 and 6, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[4]

- 5 Kate packed some clothes into a bag. Before flattening it, the mass of the bag containing the clothes was 2 kg. She then flattened the bag of clothes and removed as much air as she could from the bag.

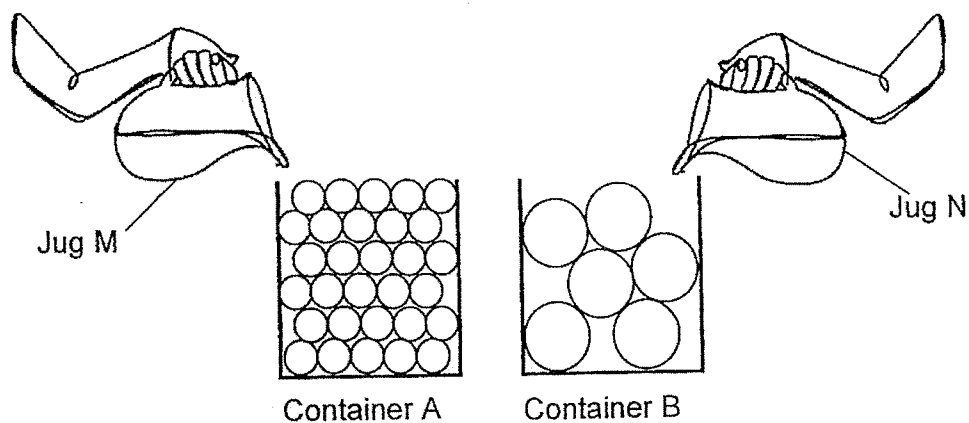


- (a) Based on the diagram above, state if there was an increase, decrease or no change in the mass of the bag after flattening. Explain your answer. [1]

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- 5 In another experiment, Kate placed plastic balls of different sizes into two identical containers, A and B as shown below. She had two jugs, M and N with 200 ml of water each. She poured the water to fill containers, A and B to the top.



Kate then measured the volume of water left in each jug and recorded her results in the table below.

| Jug | Amount of water in the jug at the start (ml) | Amount of water left in the jug (ml) |
|-----|----------------------------------------------|--------------------------------------|
| M   | 200                                          | 100                                  |
| N   | 200                                          | 50                                   |

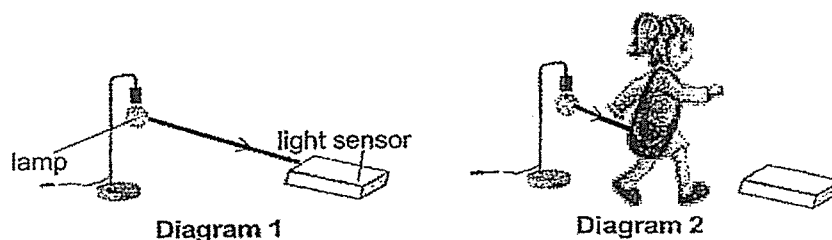
- (b) From which jug, M or N, did Kate add more water? Explain why. [1]

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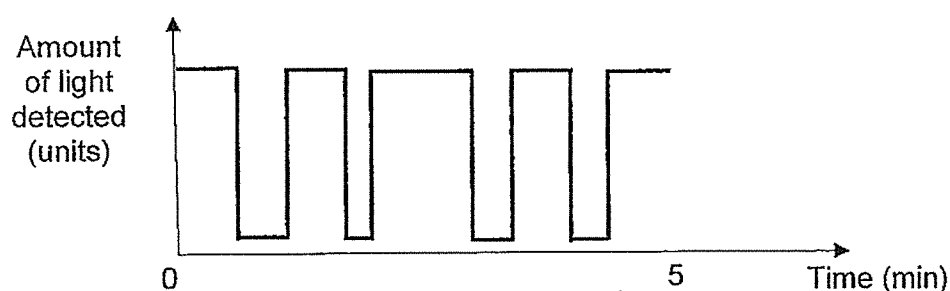


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- 6 A light sensor was set up at the entrance of the school library to count the number of visitors. Only one visitor can enter at a time. The light sensor detects light from a lamp as shown in diagram 1. Diagram 2 shows a visitor walking through the entrance, between the lamp and the light sensor.



The graph below shows the information taken from the light sensor in 5 minutes.



Based on the graph, how many visitors entered the library in 5 minutes? Using the properties of light, explain why. [2]

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**End of Paper**



## ANSWER KEY

YEAR : 2024  
 LEVEL : PRIMARY 4  
 SCHOOL : ACSP  
 SUBJECT : SCIENCE  
 TERM : WA 3

### SECTION A

|    |                                     |
|----|-------------------------------------|
| Q1 |                                     |
| Q2 | S : 10.9<br>T : 9.8<br>U : 8.4cm    |
| Q3 |                                     |
| Q4 | Magnetic : T<br>Non-magnetic : S, U |

### SECTION B

|    |                                                                                                                                                                                                                      |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q2 | 2                                                                                                                                                                                                                    |
| Q3 | 1                                                                                                                                                                                                                    |
| Q4 | 3                                                                                                                                                                                                                    |
| Q5 | <input checked="" type="checkbox"/> a) Decrease. The air that has mass.<br><input type="checkbox"/> b) N. There are more spaces between the objects in container B allowing more water to flow into the open spaces. |
| Q6 | Four. Because every time a visitor walks pass the lamp, they block the light from the light sensor so no light can pass through causing the amount of light detected to drop.                                        |

1  
END