

Test: Primary 4 - Term 4 Science (RGPS)

Points: 66 points

Name: _____

Score: _____

Date: _____

Signature: _____

Select multiple choice answers with a cross or tick:

Only select one answer

Can select multiple answers

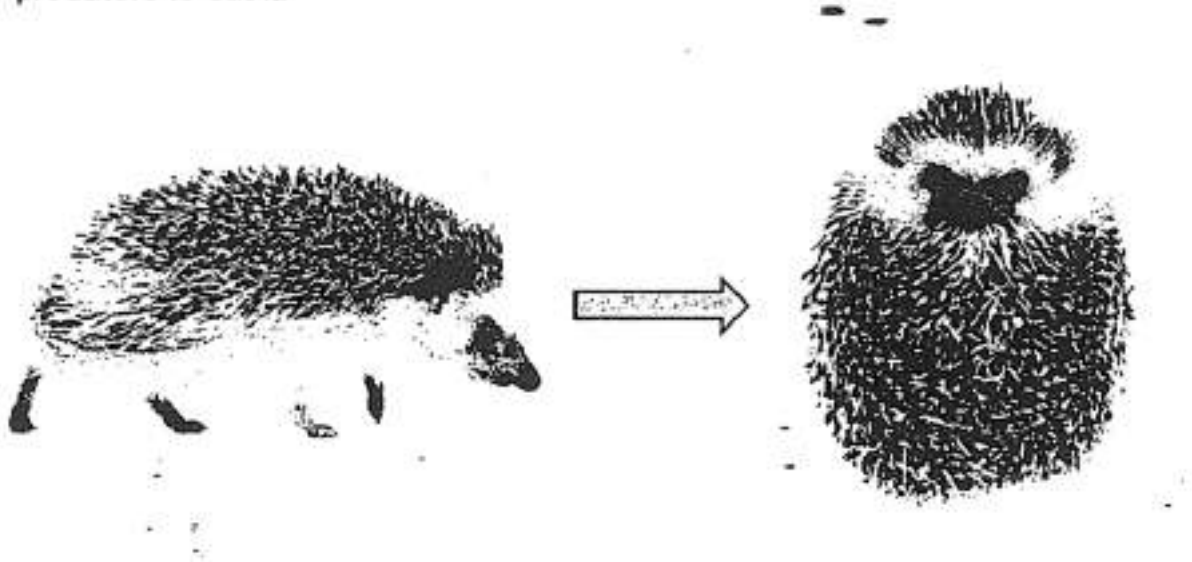
Question 1 of 58

Primary 4 Science (Term 4) 2 pts

Booklet A (52 x 2 marks)

For each question from 1 to 25, four options are given. One of them is the correct answer.

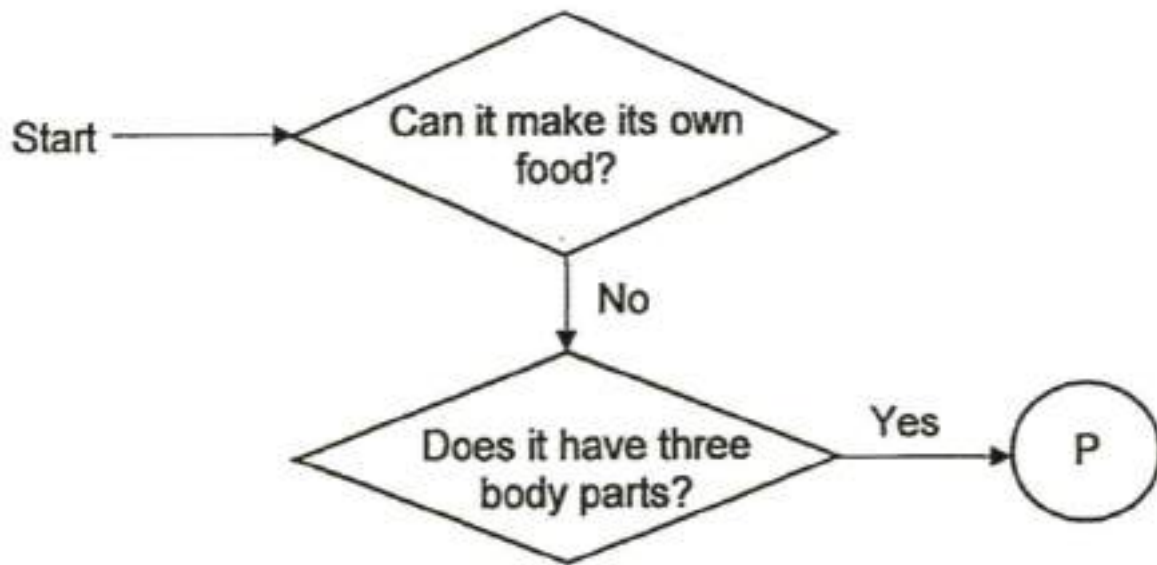
When threatened, the hedgehog curls itself up into a ball, making it difficult for predators to eat it.



This shows that the hedgehog is a living thing because it _____

- A) grows
- B) reproduces
- C) needs air, food and water
- D) respond to changes in its surroundings

Study the diagram below carefully.



What could P be?

- A) bird
- B) insect
- C) mammal
- D) amphibian

Question 3 of 58

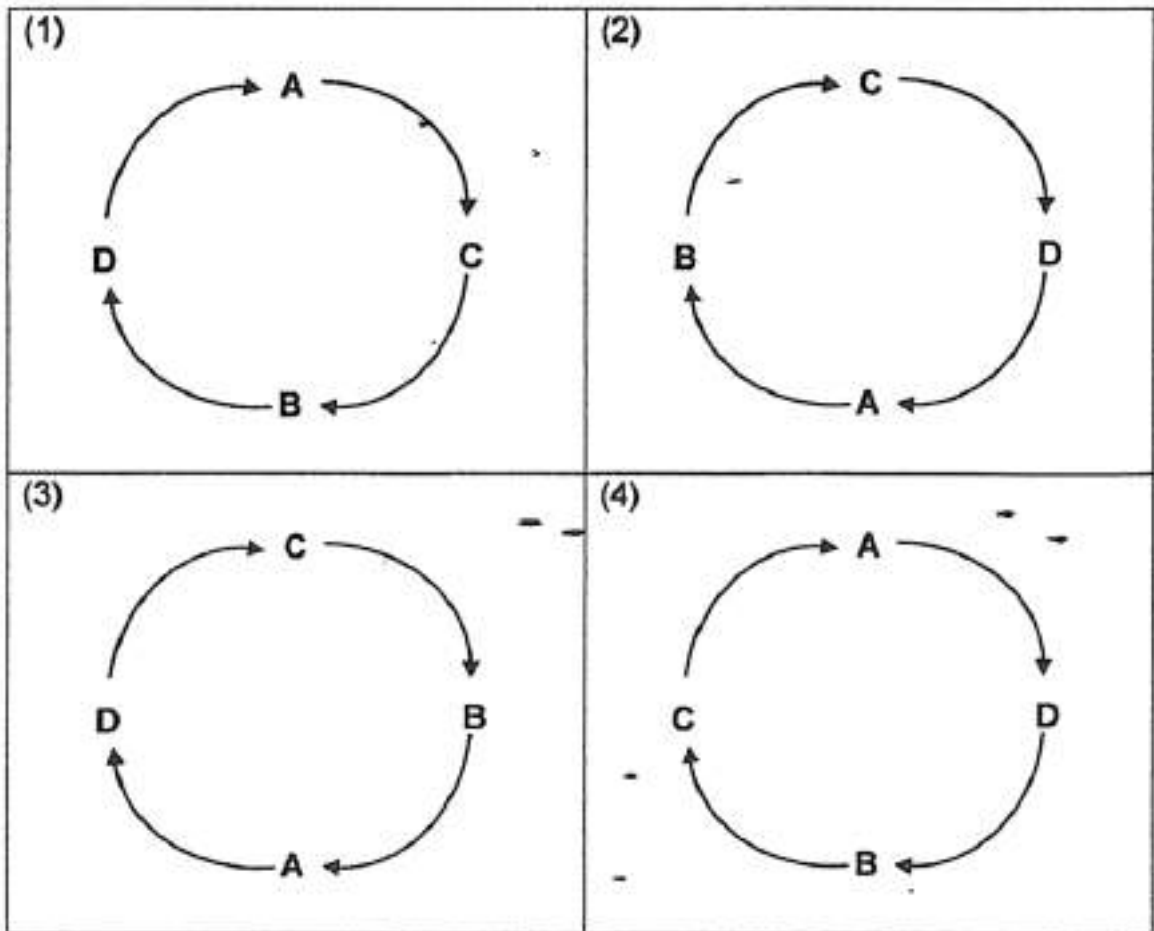
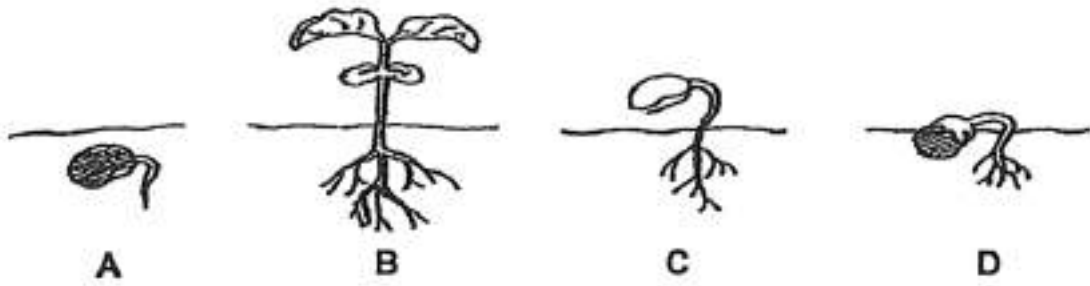
Joanne made the following observations on the life cycle of an animal.

- There are four stages in the life cycle
- Some stages of the life cycle occur in water

What animal was Joanne observing?

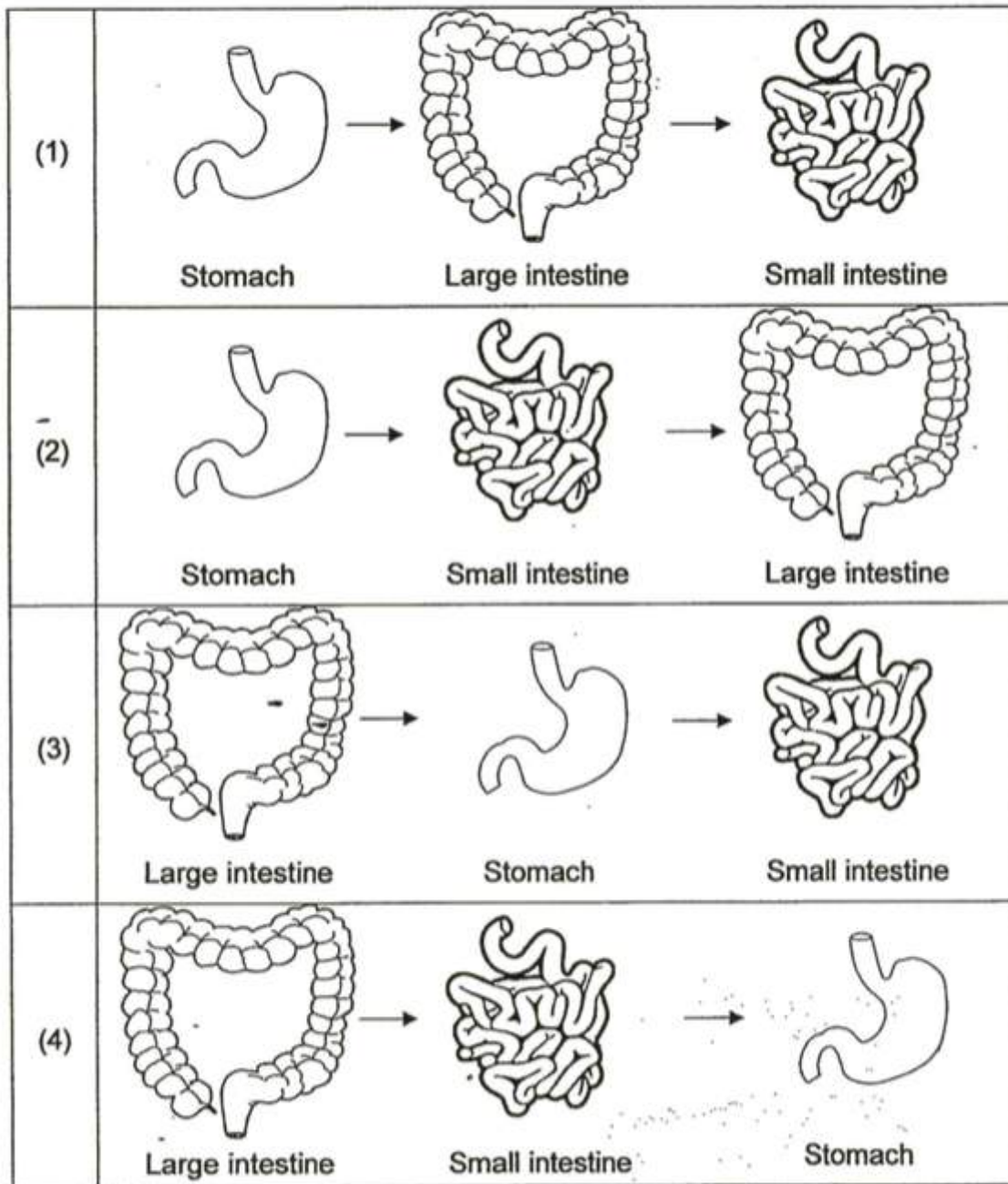
- A) frog
- B) beetle
- C) mosquito
- D) cockroach

The diagram below shows four stages of the growth of a young plant in the incorrect order. Arrange the stages in the correct order.



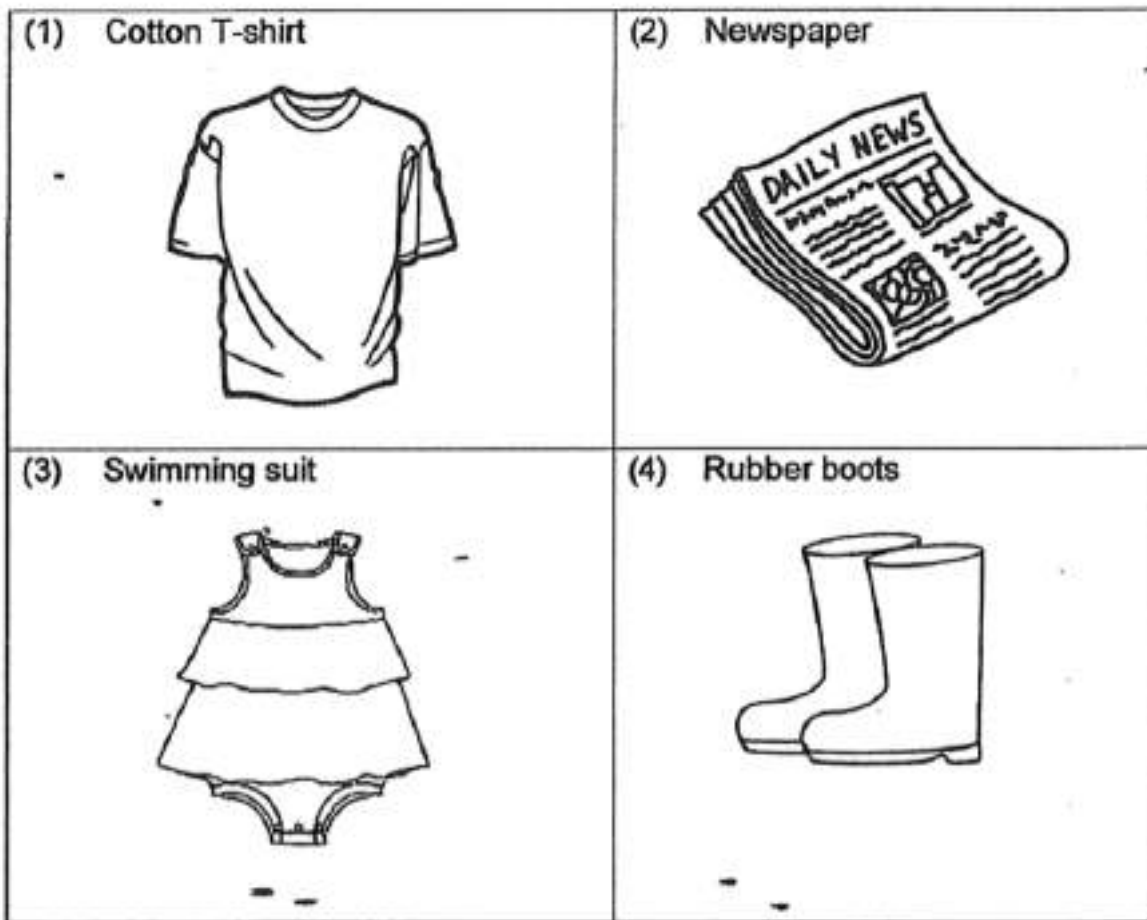
- A) 1
- B) 2
- C) 3
- D) 4

Which one of the following shows the correct sequence when food moves through some parts of the digestive system?



- A) 1
- B) 2
- C) 3
- D) 4

Which of the following objects is made of waterproof material?



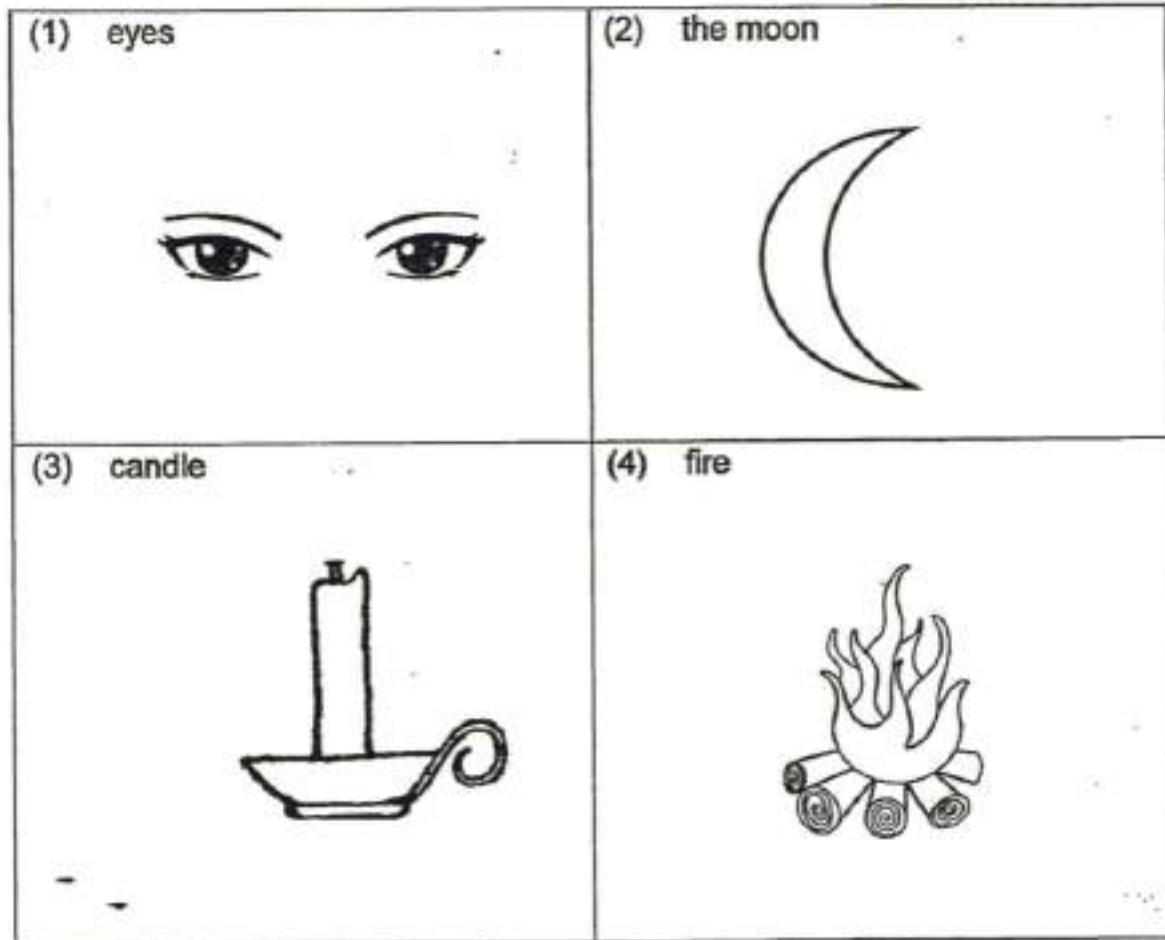
- A) 1
- B) 2
- C) 3
- D) 4

Matter is anything that has mass and occupies space.

Which of the following is not matter?

- A) oil
- B) air
- C) sand
- D) shadow

Which one of the following is a source of light?



- A) 1
- B) 2
- C) 3
- D) 4

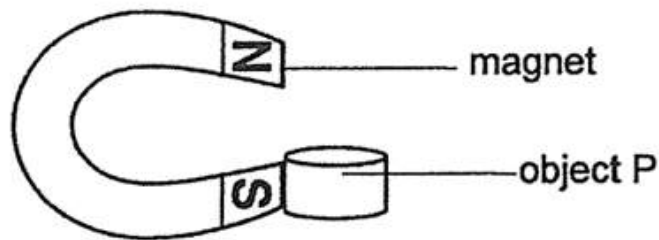
Siti cooked a pot of chicken soup in the pot shown below.



She was able to remove the lid of pot using the wooden handle. This is because wood is a _____.

- A) light material
- B) flexible material
- C) poor conductor of heat
- D) good conductor of heat

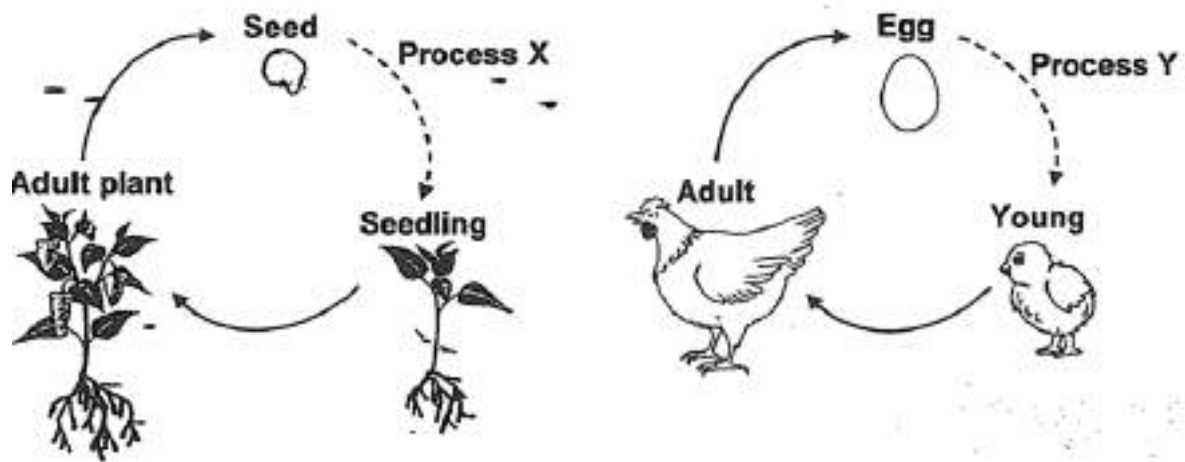
An object P was attracted to a magnet, as shown in the figure below.



Object P is made of _____.

- A) iron
- B) wood
- C) plastic
- D) rubber

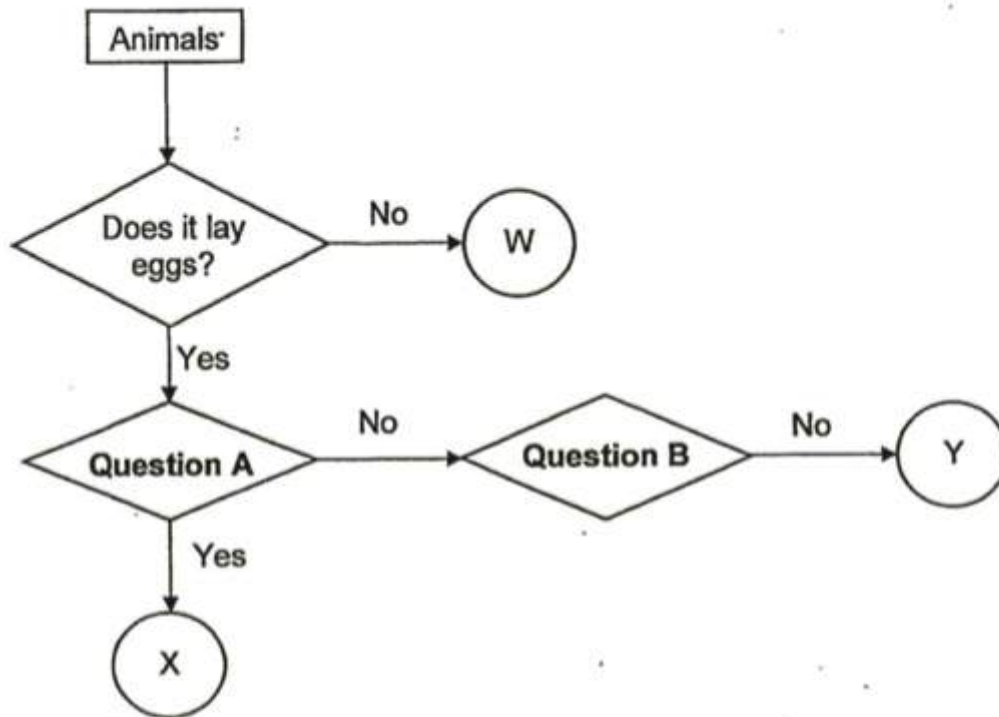
The diagrams below show the life cycles of a chilli plant and a chicken.



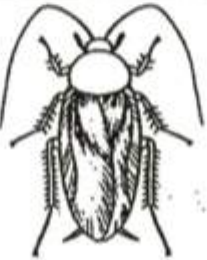

Which one of the following statements best describes the conditions that are required during process X and process Y?

- A) warmth must be present in both processes
- B) sunlight must be present in both processes
- C) both processes only takes place in the night
- D) both processes require the presence of the adults

Study the flowchart below.



Amelia identifies Animals X and Y as shown in the table below.

Animal X	Animal Y
	

What are questions A and B likely to be?

	Question A	Question B
(1)	Does it have a three-stage life cycle?	Does the young resemble its adult?
(2)	Does the young resemble its adult?	Does the young live on land?
(3)	Does it have a four-stage life cycle?	Does it have a three-stage life cycle?
(4)	Does the young live on land?	Does it have a four-stage life cycle?

- B) 2
- C) 3
- D) 4

Question 13 of 58

Primary 4 Science (Term 4) 2 pts

James wanted to conduct an experiment to find out if different amounts of digestive juices would affect the rate of digestion of noodles.

He prepared the following set-ups for the experiment.

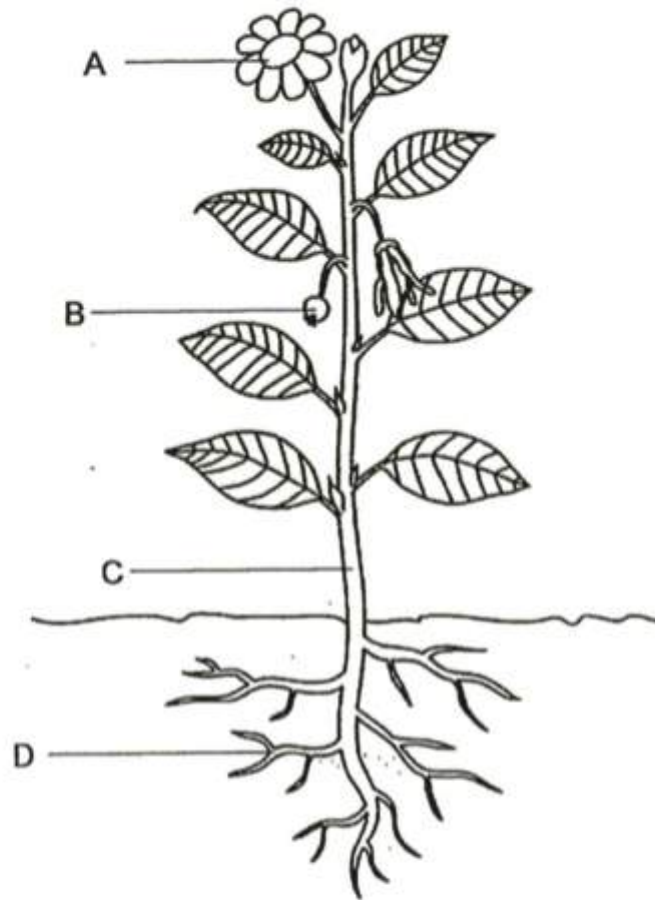
Set-up	Volume of digestive juices (ml)	Type of noodles	Mass of cooked noodles (g)	Duration of experiment (minutes)
A	5	rice	20	20
B	5	rice	40	20
C	10	rice	20	20
D	10	wheat	40	15

Which of these set-ups should James use to ensure a fair test has been conducted?

-
- A) A and B
 - B) A and C
 - C) B and C
 - D) B and D

The diagram shows a plant.

Parts A, B, C and D show the different parts of the plant.

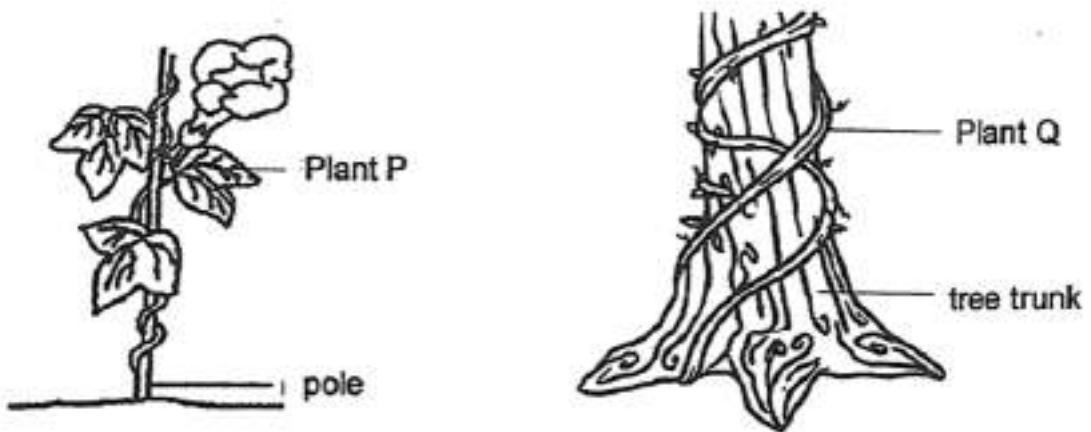


Which of the following matches the correct part of the plant to its function?

	Part	Name of part	Function
(1)	A	Flower	To make food
(2)	B	Fruit	To absorb sunlight
(3)	C	Stem	To transport water from the roots to the other parts of the plant
(4)	D	Roots	To transport food from the roots to the other parts of the plant

- A) 1
- B) 2
- C) 3
- D) 4

Plant P grew around a pole while Plant Q grew around a tree trunk.

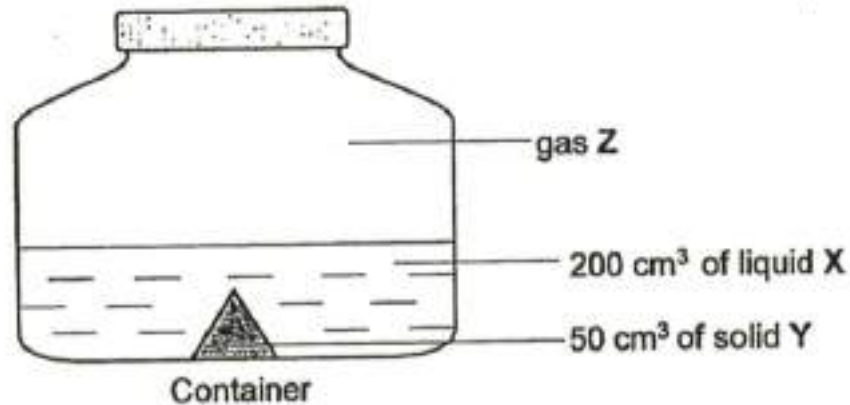


Which of the following is correct?

-
- A) Both plants are non-flowering plants
 - B) Plant p has a strong stem but plant Q has a weak stem
 - C) Both plants need a support to grow towards the sunlight
 - D) Plant P can make its own food as it has flowers but not plant Q

The diagram below shows a tightly sealed 1000-cm³ container.

The container was initially filled with 200 cm³ of liquid X and 50 cm³ of solid Y. The rest of the container was filled with gas Z.



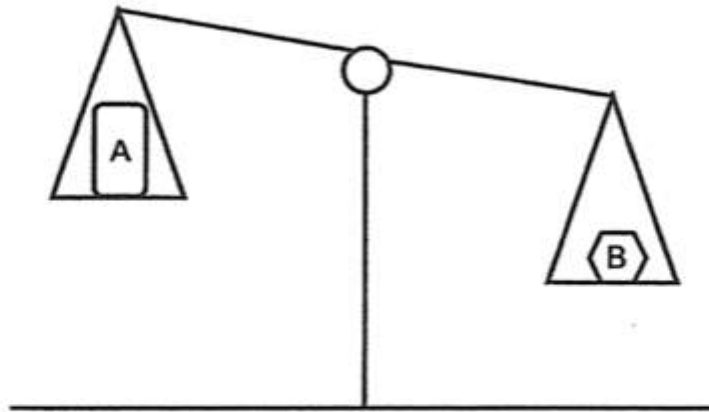
50 cm³ of liquid X was removed.

Which of the following statements about the volume of matter in the container are true?

- A The volume of gas Z was 750 cm³ at first.
- B The final volume of gas Z was 650 cm³ in the end.
- C The final volume of gas Z was 800 cm³ in the end.
- D The final volume of liquid X was 100 cm³ in the end.

-
- A) A and C
 - B) A and D
 - C) B and C
 - D) B and D

Objects A and B were placed on a balance as shown below.



Objects A and B were then placed in identical containers containing the same amount of water.

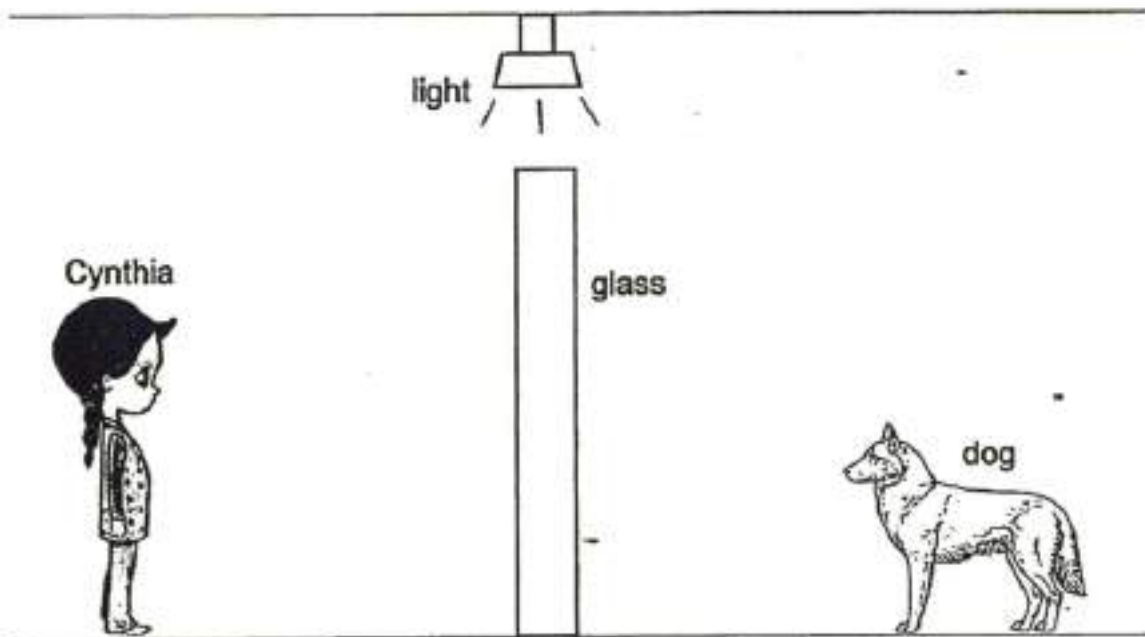


Based on the observations above, which of the following statement is true?

	Volume	Mass
(1)	Object A has a larger volume than object B.	Object A has a larger mass than object B.
(2)	Object A has a larger volume than object B.	Object A has the same mass as object B.
(3)	Object A has a larger volume than object B.	Object A has a smaller mass than object B.
(4)	Object A has a smaller volume than object B.	Object A has a greater mass than object B.

- A) 1
- B) 2
- C) 3
- D) 4

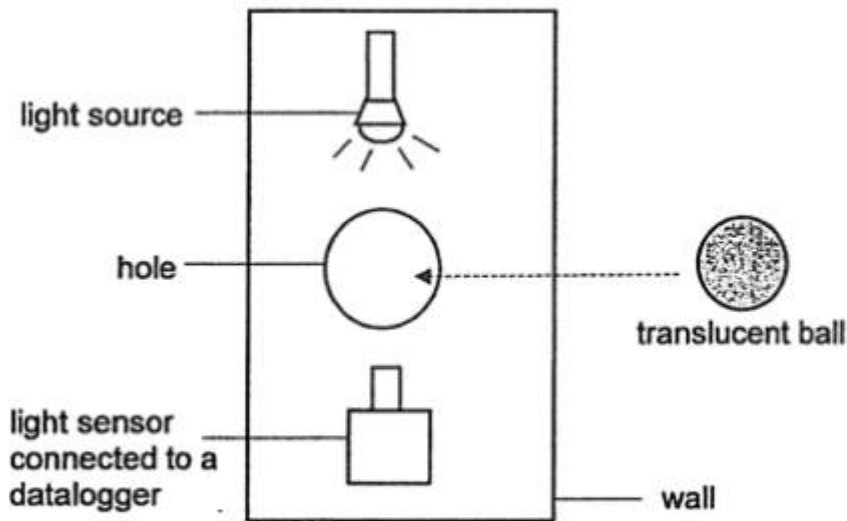
Cynthia could see her pet dog when she stood behind the glass as shown in the diagram below.



Which one of the following explains why Cynthia could see her pet dog?

- A) The glass reflected light from the dog into Cynthia's eyes
- B) The glass reflected light from the lamp into Cynthia's eyes
- C) The pet dog reflected light from the lamp through the glass into Cynthia's eyes
- D) The pet dog gave off light and the light entered Cynthia's eyes through the glass

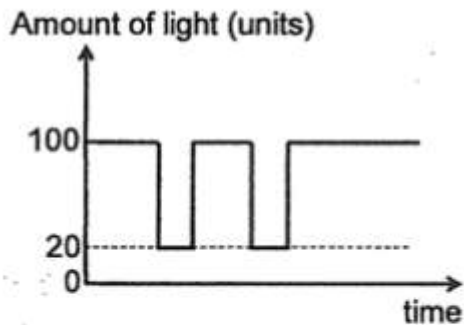
Azahar set up a light source and a light sensor to count the number of balls going through a hole as shown.



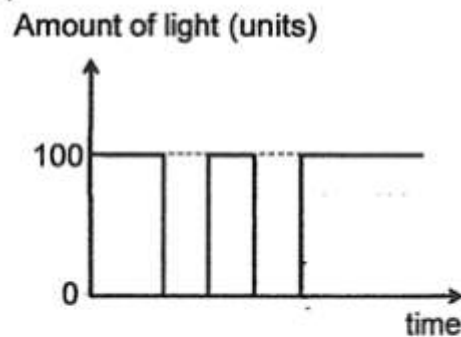
He threw a few identical balls one at a time and recorded the results.

Which one of the following graphs shows the amount of light recorded by the light sensor as he threw the ball?

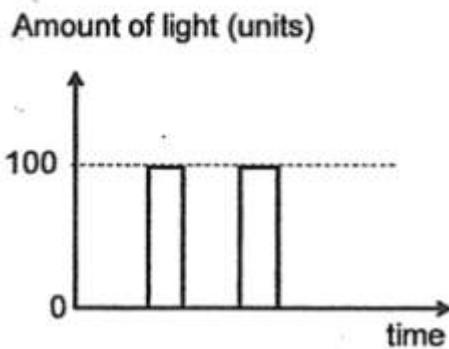
(1)



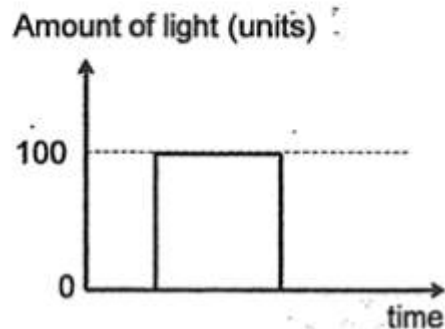
(2)



(3)



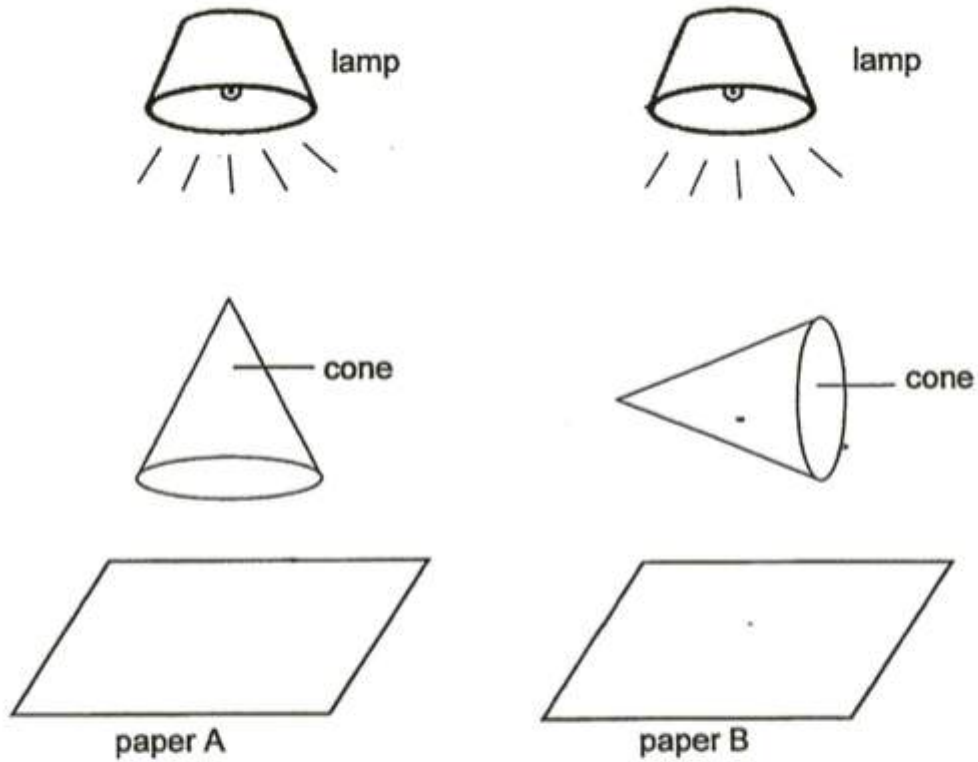
(4)



- A) 1
- B) 2
- C) 3

D) 4

Matilda studied the shadows formed by two identical cones. The cones were placed at different positions under identical light sources in a dark room.



Which one of the following shadows would be observed on each piece of the paper?

	Paper A	Paper B
(1)		
(2)		
(3)		
(4)		

- B) 2
- C) 3
- D) 4

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Primary 4 Science (Term 4)

2 pts

Samantha placed a metal spoon in a cup of ice cream.



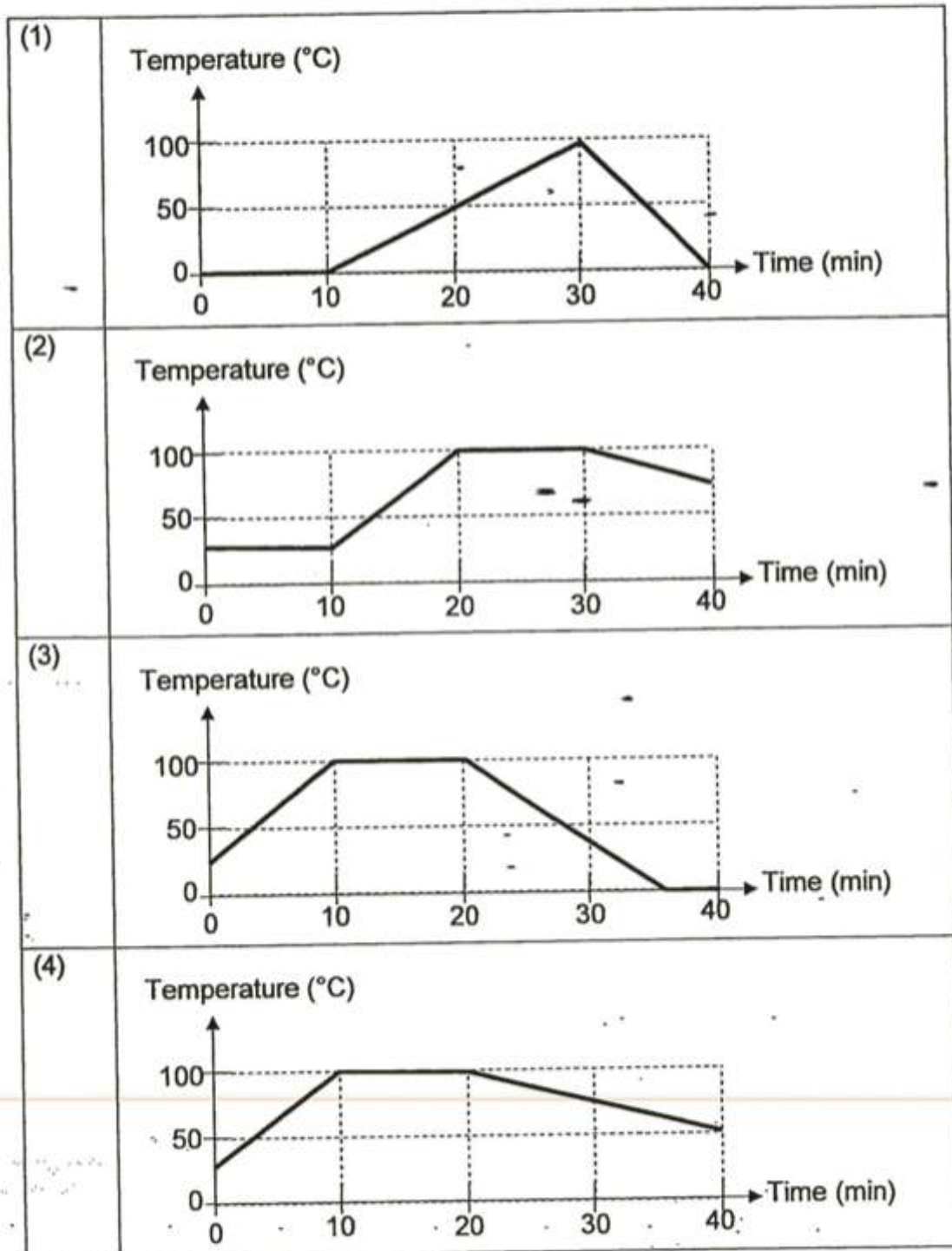
The spoon became colder after a while.

Which one of the following explains this?

-
- A) The cup lost heat to the ice cream
 - B) The ice cream lost heat to the spoon
 - C) The spoon lost heat to the ice cream
 - D) The spoon gained heat from the ice cream

Kate placed some water in a beaker at room temperature over a bunsen burner. After 10 minutes, the water started to boil. She left the water boiling in the beaker for 10 minutes. She removed the beaker immediately and left it in the freezer for another 20 minutes. At the end of the experiment, she noticed that the water is still in liquid state.

Which one of the following graphs correctly shows the results of Kate's experiment?



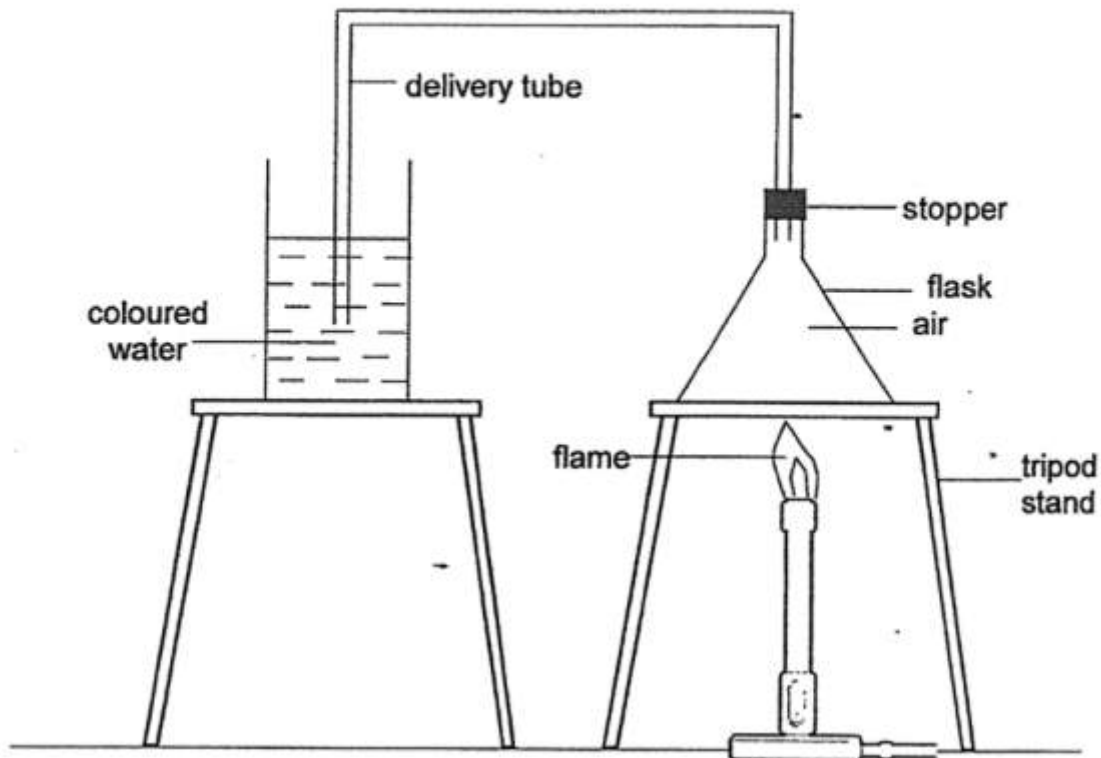
A) 1

B) 2

C) 3

D) 4

Daniel prepared a set-up to investigate the effect of heat on the volume of air in the flask as seen below.

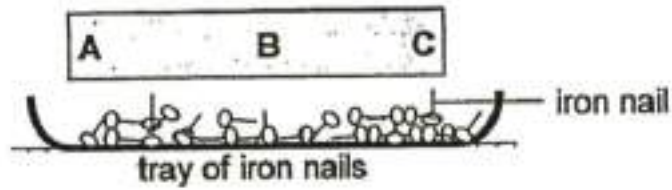


Which one of the following correctly describes the observation of the experiment and the explanation for the observation?

	Observation	Explanation
(1)	Coloured water was drawn into the delivery tube.	Heat causes a decrease in the volume of air.
(2)	Coloured water was drawn into the delivery tube.	Heat causes an increase in the volume of air.
(3)	Formation of bubbles observed in the coloured water.	Heat causes a decrease in the volume of air.
(4)	Formation of bubbles observed in the coloured water.	Heat causes an increase in the volume of air.

- A) 1
 B) 2
 C) 3
 D) 4

Annika labelled the different parts of a bar magnet, A, B and C as shown in the diagram below. She brought the bar magnet close to a tray of iron nails as shown in the diagram below

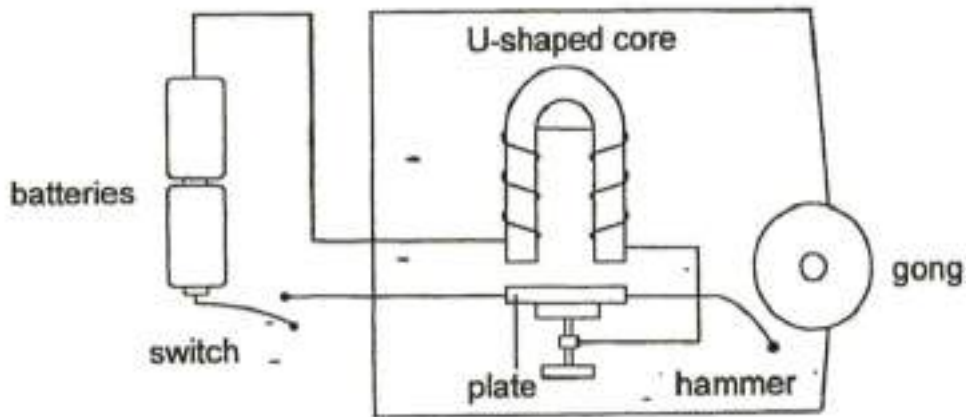


Which of the following would most likely show the number of iron nails that would be attracted to parts A, B and C of the magnet?

	A	B	C
(1)	2	6	2
(2)	3	1	8
(3)	6	1	5
(4)	8	6	3

- A) 1
- B) 2
- C) 3
- D) 4

The diagram below shows the door bell system. When the switch is closed, the U-shaped core will be magnetized and become an electromagnet, attracting the plate with the hammer, hitting the gong.



What of the following materials should be used to make the U-shaped core and plate?

	U-shaped core	Plate
(1)	Aluminium	Iron
(2)	Iron	Steel
(3)	Steel	Copper
(4)	Copper	Iron

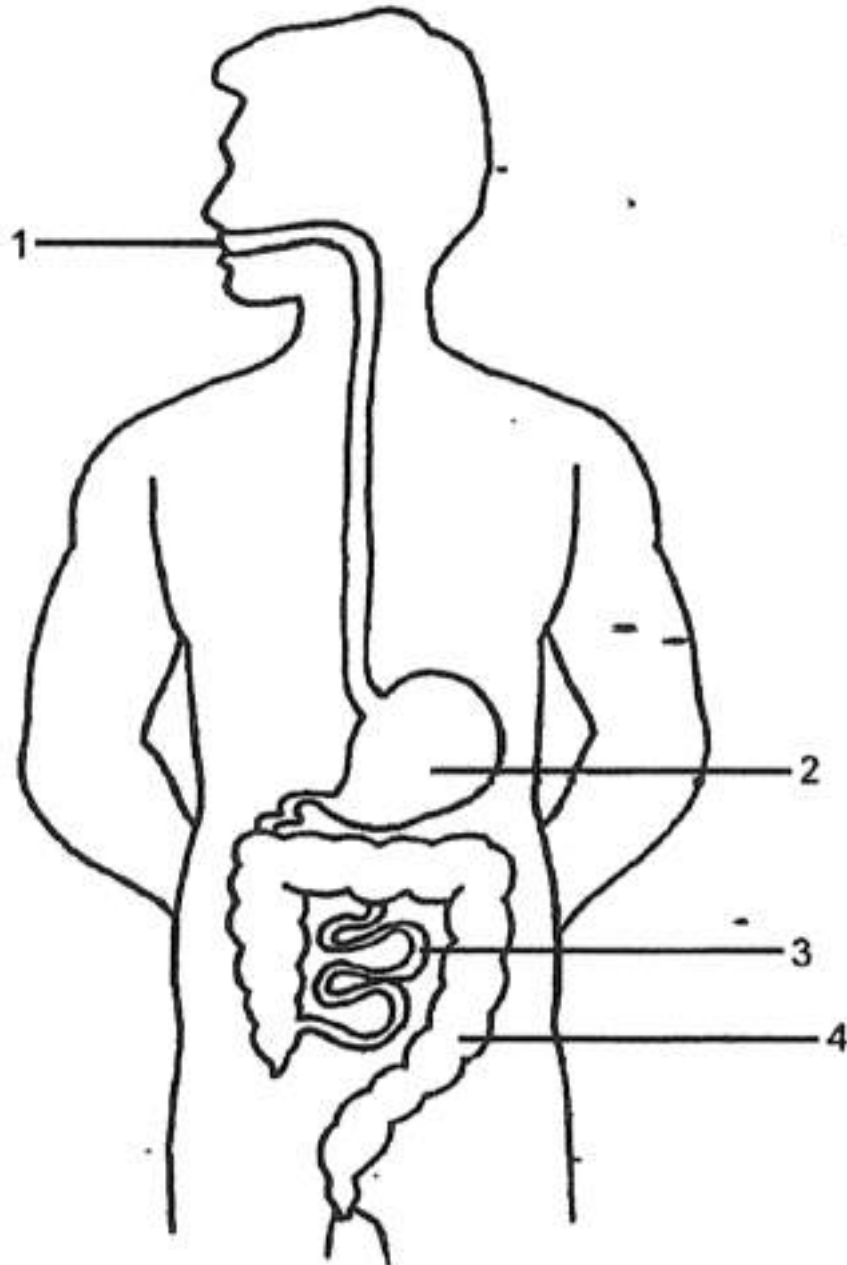
- A) 1
- B) 2
- C) 3
- D) 4

Booklet B

This section is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

The diagram below shows the human digestive system.



Based on the diagram above, identify the part where

(a) digestion is completed: _____

-
- A) 1
 B) 2

C) 3

D) 4

Question 27 of 58

Primary 4 Science (Term 4)

1 pt

Water is removed from the undigested food:

A) 1

B) 2

C) 3

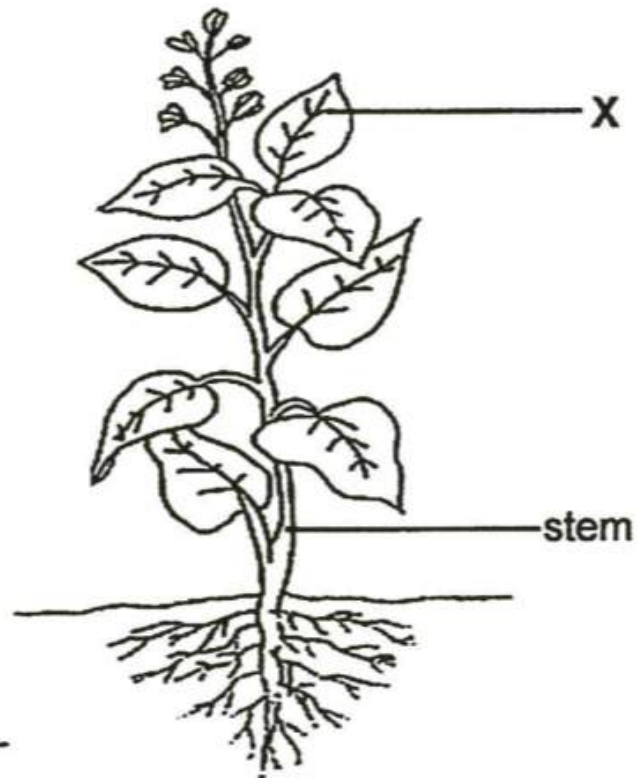
D) 4

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Primary 4 Science (Term 4)

1 pt

The diagram shows plant Y.



(a) Name plant part X.

X: _____

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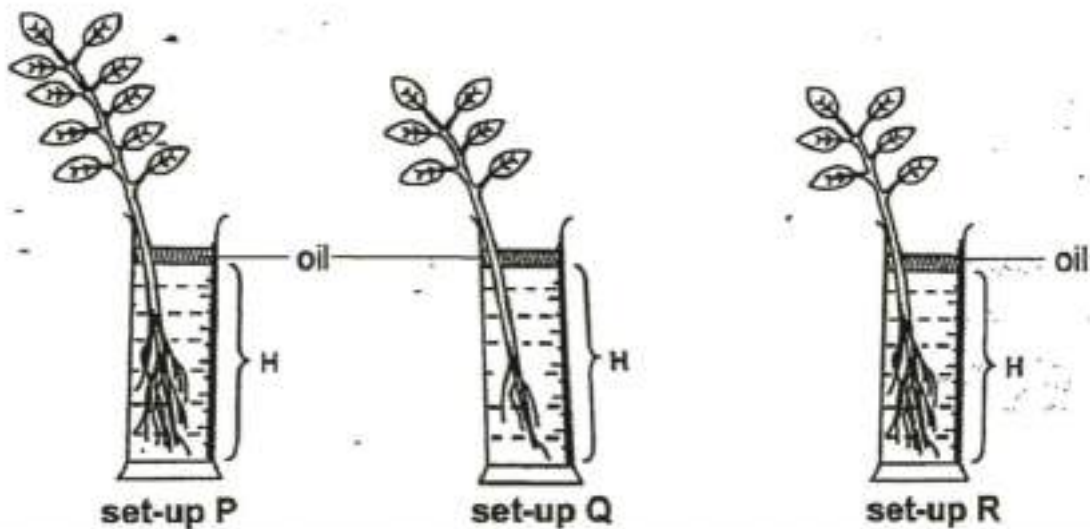
Primary 4 Science (Term 4) 1 pt

The substance that the stem of the plant transports from plant part X to other parts of the plant is _____

Question 30 of 58

Primary 4 Science (Term 4) 0 pts

Xiuli left three set-ups of plant Y near a window in her kitchen as shown. She then recorded the water level, H after 2 days.



Xiuli wanted to find out if the amount of roots of a plant affects the amount of water taken in. Which set-ups should Xiuli use to carry out a fair test to investigate her aim? Explain your answer clearly.

Question 31 of 58

Primary 4 Science (Term 4) 0 pts

Which of the three set-ups will have the lowest water level H recorded after 2 days? Explain your answer clearly.

The picture below shows an empty bottle.



Circle the correct state for the following things.

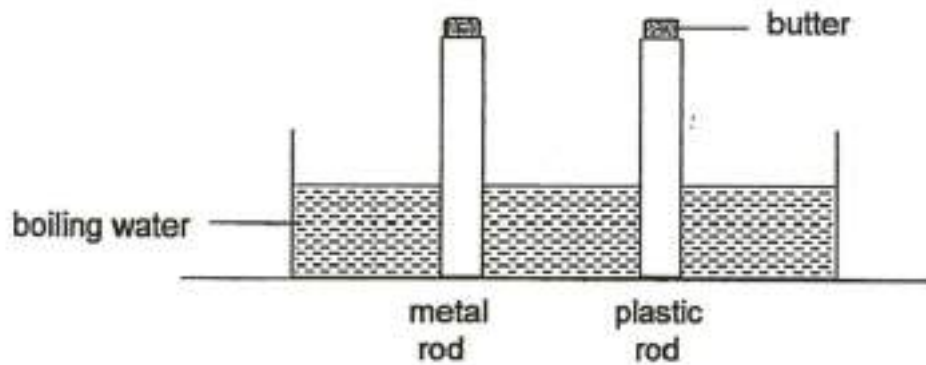
Bottle cap:

-
- A) solid
 - B) liquid
 - C) gas

Content inside bottle:

-
- A) solid
 - B) liquid
 - C) gas

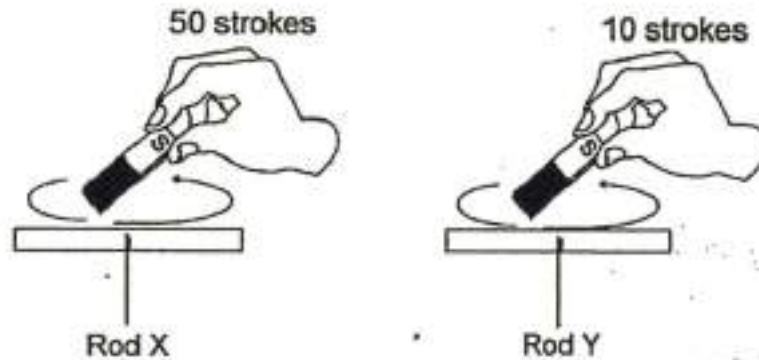
Meixuan placed a metal rod and a plastic rod into a tank of boiling water as shown below. Equal amounts of butter were put on both rods of the same height.



What would Meixuan observe and why?

Meixuan observed that the butter on the plastic rod melted more _____ than the butter on the metal rod, as plastic is a _____ conductor of heat than metal. [2]

Diane stroked two similar iron rods X and Y with the same magnet as shown in the figure below.



Both rods became temporary magnets and were used to attract similar paper clips.

(a) Tick (✓) the correct answer in the table below. [1]

Rod X attracted _____ Rod Y

- A) less paper clips than
- B) more paper clips than
- C) the same number of paper clips as

Diane's observations show that the paper clips are ___ objects.

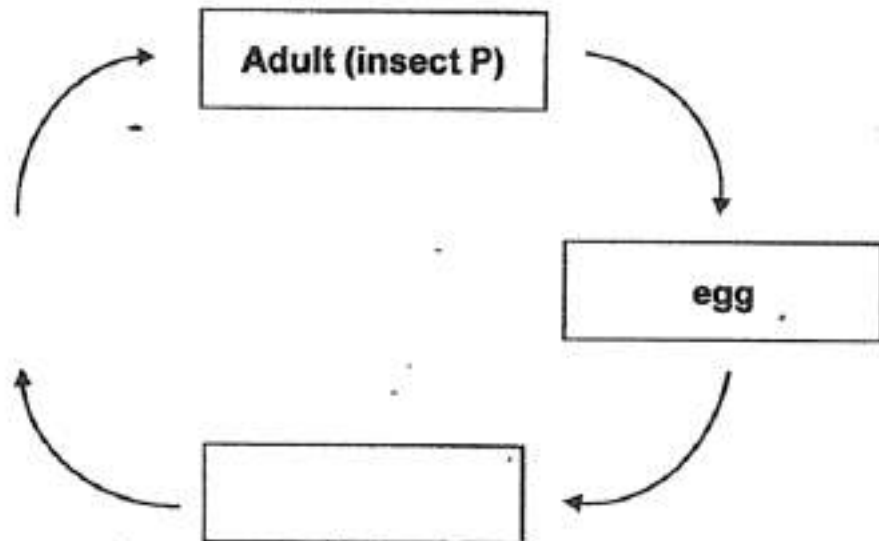
- A) strong
- B) magnetic
- C) flexible

Insect P lays eggs on dead animals upon their death.



Insect P

(a) Complete the life cycle of insect P as shown below.

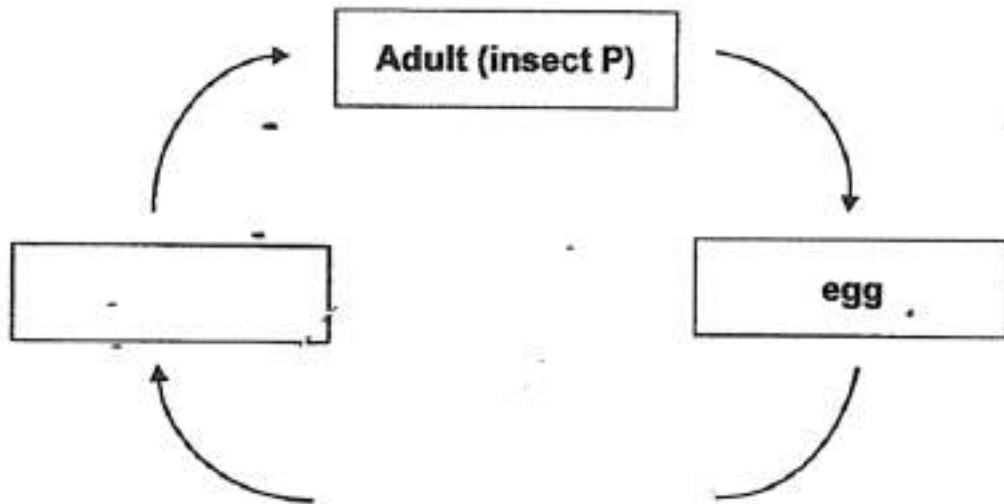


Insect P lays eggs on dead animals upon their death.



Insect P

(a) Complete the life cycle of insect P as shown below.



The table below shows the surrounding temperature and the number of days taken for an egg of insect P to turn into an adult.

Surrounding temperature (°C)	Number of days taken for an egg of insect P to turn into an adult
20	27
25	23
30	15
35	12
40	12

- (b) What is the relationship between the surrounding temperature and the number of days taken for an egg of insect P to turn into an adult? [2]

<p>Surrounding temperature from 20°C to 35°C</p>	<hr/> <hr/> <hr/> <hr/> <hr/>
<p>Surrounding temperature from 35°C to 40°C</p>	<hr/> <hr/> <hr/> <hr/> <hr/>

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Primary 4 Science (Term 4) 0 pts

Eleana measured 5 ml of four different substances and added these substances into four different test tubes. Each of the test-tube contains a piece of food. The experiment took place at room temperature.

She recorded the time taken for the piece of food to be broken down into simpler substances. The results of her investigation is shown in the table below.

Substance	A	B	C	D
Time taken for the piece of food to be broken down into simpler substances (minutes)	8	3	6	more than 10

- (a) Which substance, A, B, C or D, was most effective in breaking down the piece of food into simpler substances? Explain your answer. [1]
-

Question 41 of 58

Primary 4 Science (Term 4) 0 pts

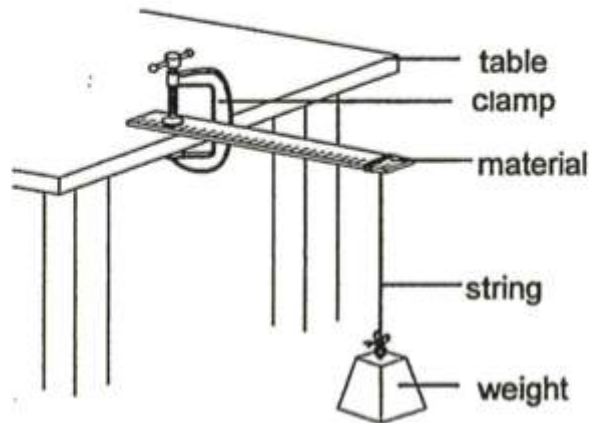
Eleana observed that the piece of food was still intact in the set-up with substance D at the end of the 10 minutes. Based on her observation, what can Eleana conclude about the Set-up with substance D at the end of the 10 minutes?

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Primary 4 Science (Term 4) 1 pt

State the organ system that is involved in transporting the simpler substances to the other parts of the body

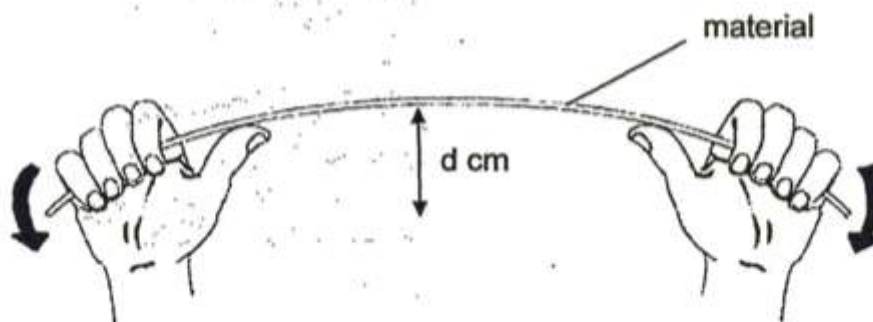
Marie carried out an experiment using four different strips of materials, P, Q, R and S, of the same length and thickness. She hung weights on the end of each material. She kept increasing the mass of the weights till the strip of material started to break.



The table below shows the mass of the weights each material could hold before it started to break.

Materials	Total mass of weights before it started to break (kg)
P	3.5
Q	8.5
R	13.0
S	17.5

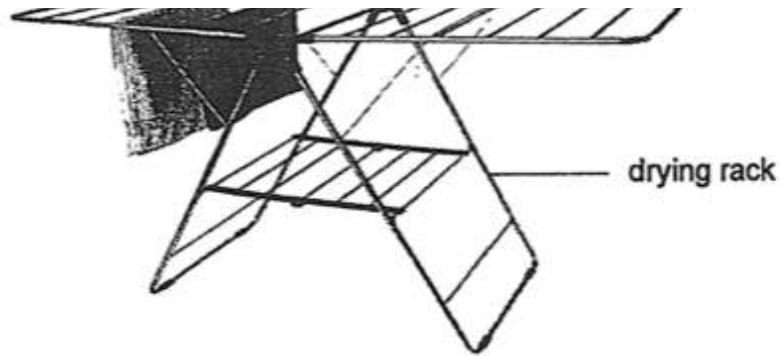
Marie conducted the second experiment as shown below. She then measured the maximum distance, d cm, each strip of material could bend.



Materials	d (cm)
P	0
Q	5
R	13
S	0

- (a) Marie wanted to choose one of the above materials P, Q, R or S to make a drying rack to dry wet clothes as shown below.





Based on the results obtained from the two experiments, which material, P, Q, R or S, is most suitable for making the drying rack? Explain your answer clearly. [2]

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Primary 4 Science (Term 4) 0 pts

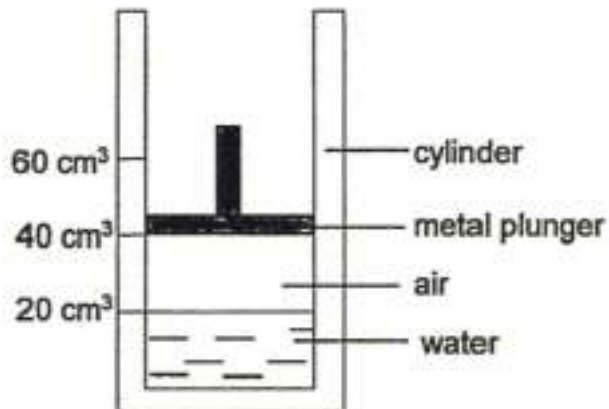
State another property of the material that is needed to be considered for making the drying rack

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Primary 4 Science (Term 4) 0 pts

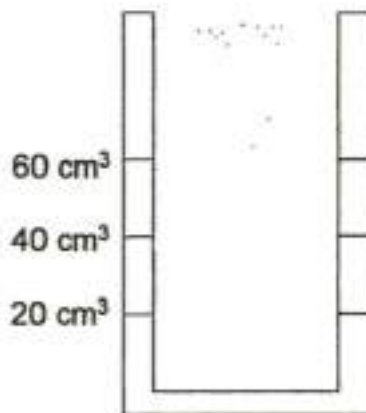
Based on the results obtained from the two experiments, which one of the materials P, Q, R or S is most suitable for making a fabric bag? Explain your answer.

The diagram shows a set-up with a cylinder and a metal plunger. Aisha filled the cylinder with 20 cm³ of water leaving 20 cm³ of air.



Aisha pushed the metal plunger downwards as far as she could without any air or water escaping.

(a) Draw how the set-up would look like after she pushed the metal plunger downwards. [1]



Please type "done" to proceed to the next question

Explain your answer in (A).

Peter wanted to investigate the degree of transparency of materials, A, B and C. He prepared the set-up and placed each material in between the light source and the light sensor as shown below.



The amount of light detected by the light sensor are shown in the table below.

Materials	Amount of light detected by the light sensor (unit)
A	243
B	770
C	0

- (a) Based on the readings above, arrange the materials, A, B and C, in order of their degree of transparency, starting with the most transparent material.

[1]

1. [] most transparent

A. C

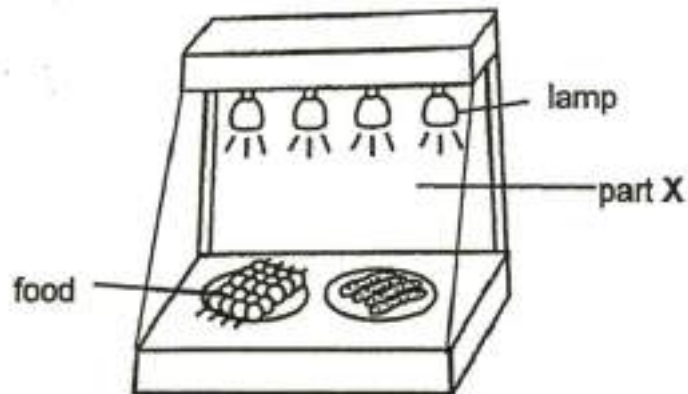
2. [] transparent

B. A

3. [] opaque

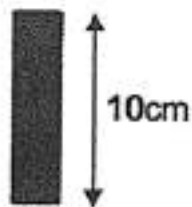
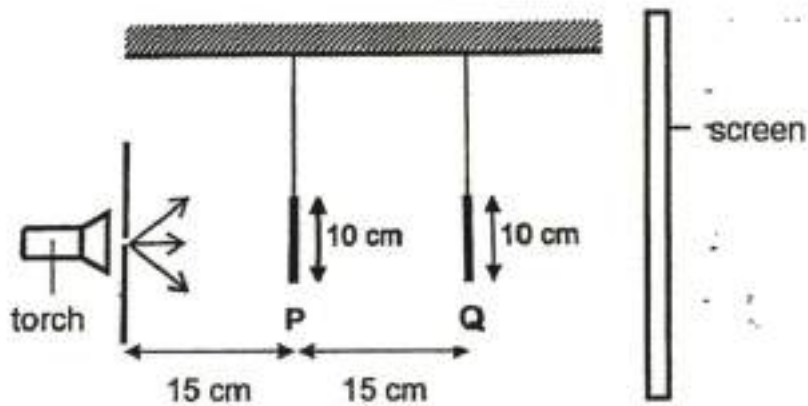
C. B

Peter's mother owns a food stall in the canteen. She placed the cooked food in an enclosed food warmer cabinet as shown below such that the pupils could see and select the food when they ordered it.

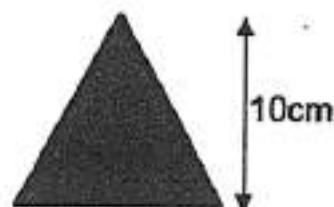


- (b) Based on Peter's results, which material, A, B or C, is most suitable for making part X of the food warmer cabinet such that the pupils could see and select the food when they place their order? Explain your answer. - [1]
-

- (c) Peter conducted an experiment to find out the size of shadows of different objects formed on the screen. Two opaque objects, P and Q, were placed at different distance from the torch as seen below.



Object P



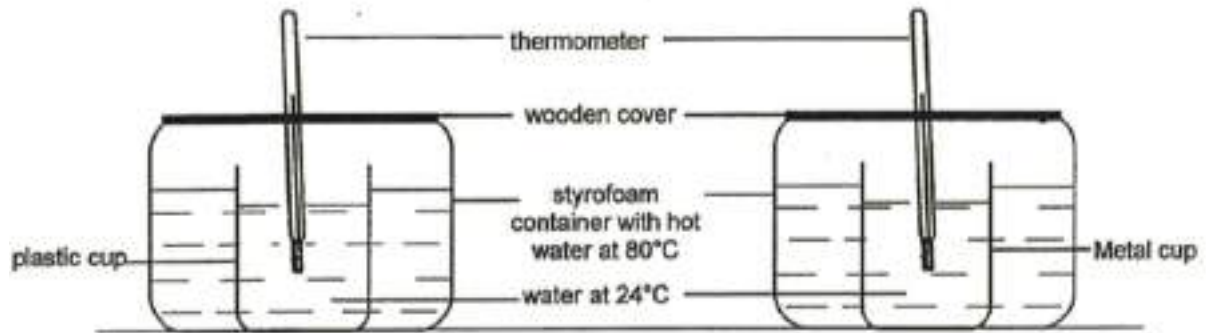
Object Q

Draw the shadow of objects, P and Q, that would be formed on the screen in the box below. [1]

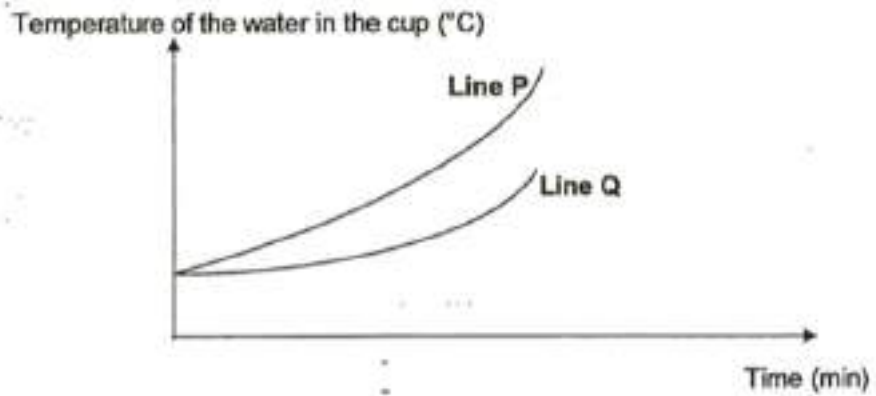
Please type "done" to proceed to the next question

Without moving the location of objects P and Q, suggest one way that Peter could cast a bigger shadow of object P and Q on the screen.

Sylvia set up the following experiment as shown below. The cups and beakers have the same volume of water in both set-ups.



Sylvia took the temperatures of the water in both cups using a thermometer at every minute interval for 10 minutes and recorded two sets of data. The results are represented in the line graphs below.



- (a) State the lines that best represent the temperature of the water in the cups over time in the graph above. [1]

Temperature of the water in plastic cup : Line _____

- A) P
- B) Q

Temperature of the water in the metal cup: _____

- A) P
- B) Q

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Primary 4 Science (Term 4) 0 pts

Explain the result of the line graph that represented the temperature of the water in the metal cup

Question 55 of 58

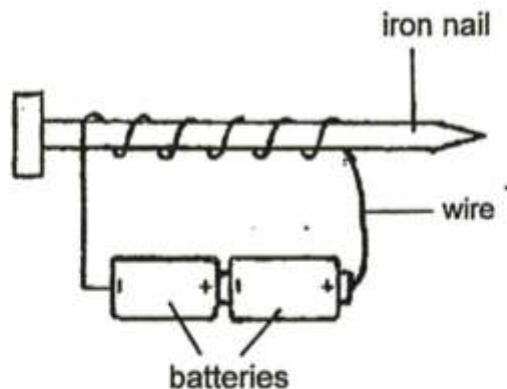
Primary 4 Science (Term 4) 0 pts

Sylvia had forgotten to remove the thermometers in each cup. She observed that the water in the cups reached the same temperature after 16 hours. Give a reason for her observation.

Question 56 of 58

Primary 4 Science (Term 4) 1 pt

Paul made an electromagnet using two batteries, an iron nail and a piece of wire as used below.



He tested the magnetic strength of the electromagnet by placing it near a tray of pins. He then recorded his observations in the table below.

(a) Complete the table below.

[1]

Number of turns of the coils around the iron nail	5	10	15	20
Number of pins attracted by the iron nail	1	3	(a) _____	7

(b) He then repeated the experiment using a copper nail.

Complete the table below by ticking (✓) the correct boxes accordingly to ensure a fair experiment. [1]

Variables	Kept the same	To be changed
Number of batteries used		
Number of turns of the coils		
Length of wire		
Type of nail used		

Please type "done" to proceed to the next question

Predict the number of pins that the copper nail would be able to attract when Paul made 25 turns of coils around it. Give a reason for your prediction.
