

Test: (F) Primary 4 - Term 4 Science (MGS)

Points: 65.2 points

Name: _____

Score: _____

Date: _____

Signature: _____

Select multiple choice answers with a cross or tick:

Only select one answer

Can select multiple answers

Booklet A (28 x 2 marks)

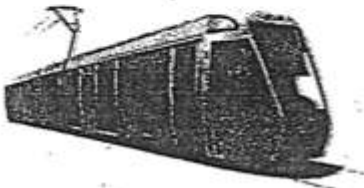
For each question from 1 to 28, four options are given. One of them is the correct answer.

Which one of the following is not a living thing?

(1)



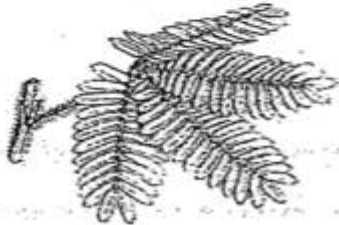
(2)



(3)



(4)

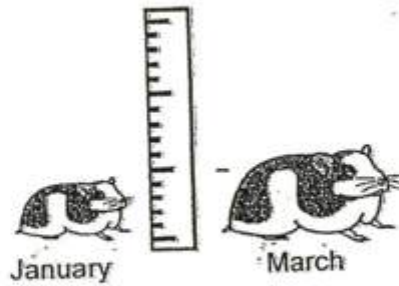


-
- A) 1
- B) 2
- C) 3
- D) 4

Question 2 of 57

Primary 4 Science (Term 4) 2 pts

Sarah bought a hamster from the pet store in January and measured its height. Two months later, she measured its height again.



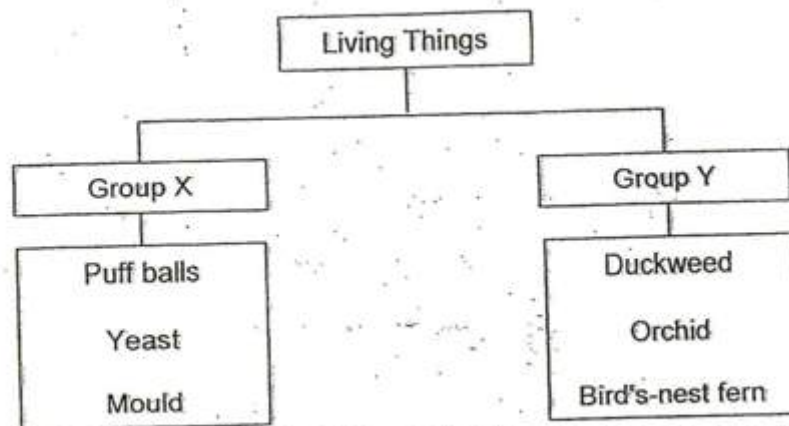
Based on her observation, Sarah concluded that the hamster is a living thing because it can _____.

- A) die
- B) grow
- C) reproduce
- D) respond to change

Question 3 of 57

Primary 4 Science (Term 4) 2 pts

The table below shows how some living things can be grouped.



Which one of the following is the most suitable heading for group X?

- A) fungi
- B) plants
- C) bacteria
- D) animals

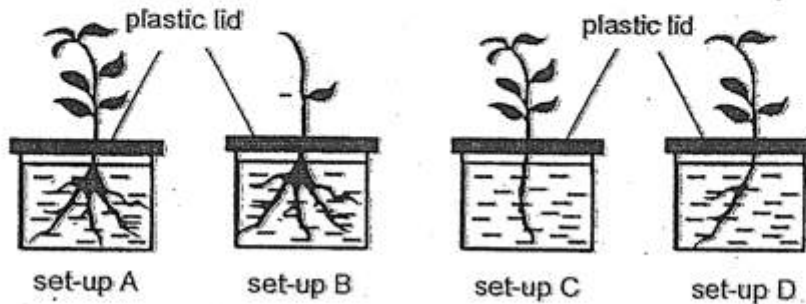
Question 4 of 57

Primary 4 Science (Term 4)

2 pts

Adrian wanted to find out if plants take in water through their roots.

He prepared four set-ups A, B, C and D. Each set-up contains a similar plant with some of the plant parts removed as shown below. Each set-up contains 250 ml of water.



Which two set-ups above should Adrian use to conduct a fair test?

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

Question 5 of 57

Primary 4 Science (Term 4)

2 pts

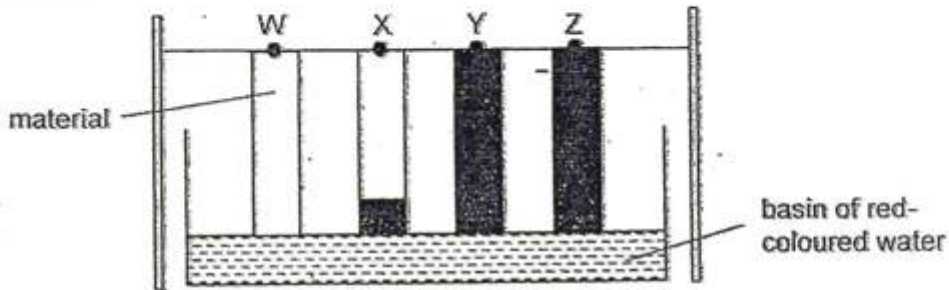
A carpenter used a hammer to hit a nail into a piece of wood.



Steel is used to make the hammer because steel _____

- A) is shiny
- B) is strong
- C) sinks in water
- D) conducts heat well

Mark conducted an experiment to compare the absorbency of different materials. He placed four strips of materials W, X, Y and Z, of identical size, into a basin of red-coloured water for 10 minutes. Mark recorded his observations as shown in the diagram below. He shaded the part of each material that had absorbed the red-coloured water.



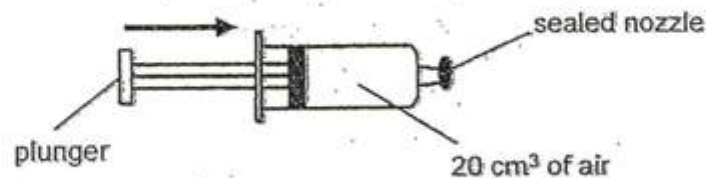
Based on the on the diagram above, which of the following shows the most suitable material to make a raincoat, handkerchief and toilet paper?

	Raincoat	Handkerchief	Toilet paper
(1)	X	Y	Y
(2)	W	Z	X
(3)	X	Y	Z
(4)	W	Z	Y

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

Question 7 of 57

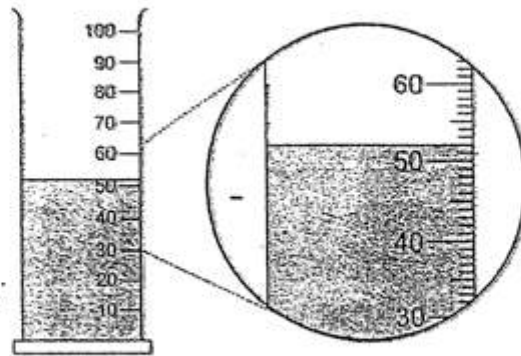
The diagram below shows a syringe filled with 20 cm³ of air. The nozzle was sealed before the plunger was pushed in.



What was the volume of air after the plunger was pushed in?

- A) 0cm³
- B) 20cm³
- C) less than 20cm³
- D) more than 20cm³

The diagram below shows a measuring cylinder containing liquid Y.



What is the volume of liquid Y?

- A) 50ml
- B) 52ml
- C) 50.2ml
- D) 51.5ml

Question 9 of 57

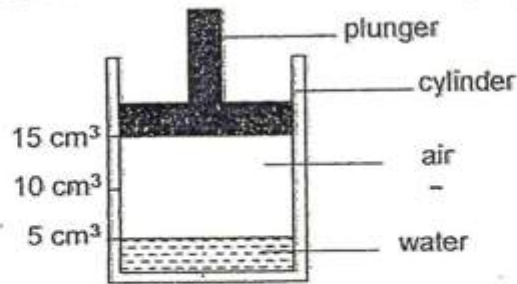
Mr Lim, who is 68 years old, needs to put on his dentures (false teeth) before he eats.



Why does Mr Lim need to put on his dentures before he starts eating?

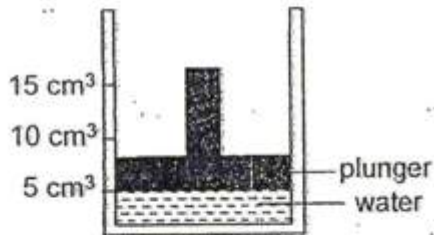
- A) They help to digest the food
- B) They help to release digestive juices into his mouth
- C) They help to break down the food into smaller pieces
- D) They help to make food soft and wet so that it can be swallowed easily

Stacy filled a cylinder with 5 cm³ of water and sealed it with a plunger as shown below.

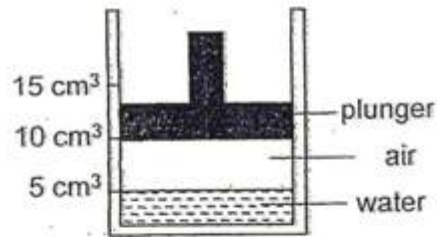


What would Stacy see after she pushed the plunger downwards as far as she could without any air or water escaping?

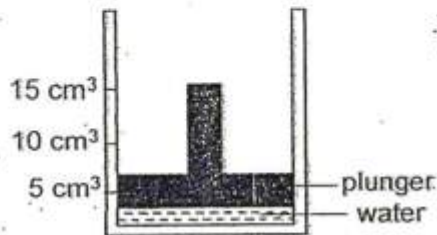
(1)



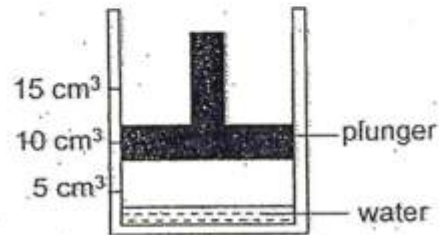
(2)



(3)



(4)



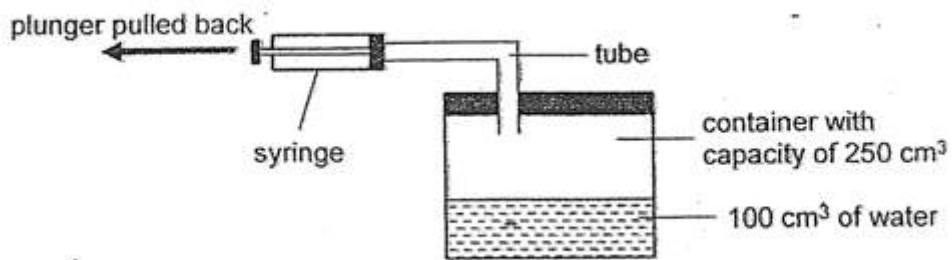
- A) 1
- B) 2
- C) 3
- D) 4

Question 11 of 57

Which one of the following properties is true for both air and a block of ice?

- A) they can be seen
- B) they take up space
- C) they have fixed shapes
- D) they have fixed volumes

The diagram below shows a syringe that was fitted to a container through a tube.



Each time the plunger of the syringe was pulled back completely, 30 cm³ of air would be drawn out of the container. Which one of the following shows the correct volume of air and water in the container after the plunger was pulled back completely once?

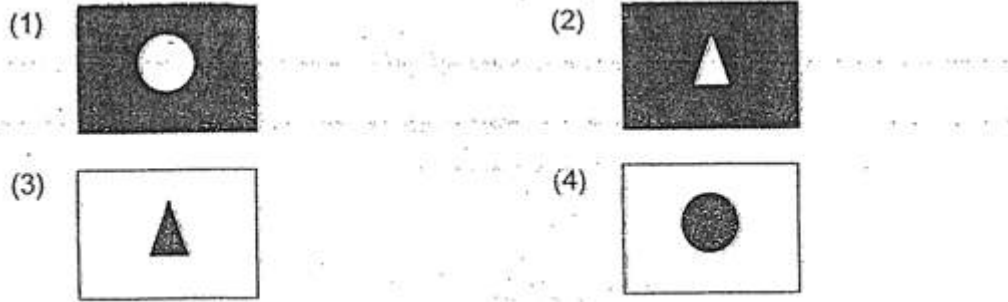
	Volume of air (cm ³)	Volume of water (cm ³)
(1)	120	130
(2)	120	100
(3)	150	100
(4)	180	100

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

The set-up below shows light shining on a wooden cone.

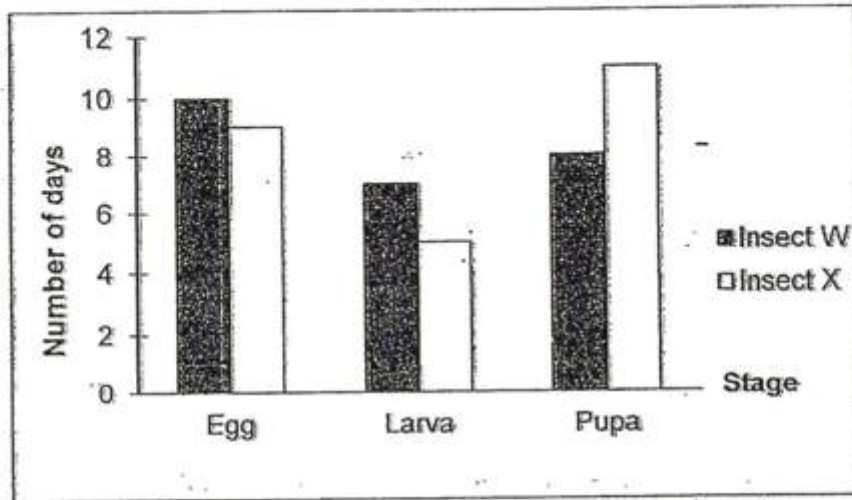


Which one of the following shadows would most likely be seen on the screen?



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

The graph below shows the number of days it takes for each stage in the life cycles of insects W and X.

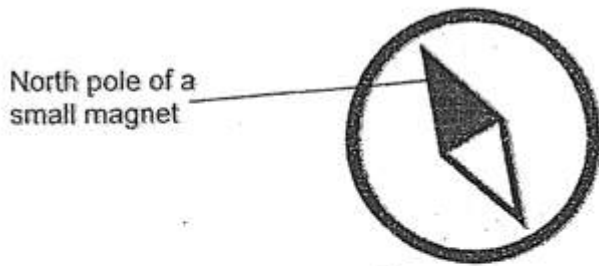


Which stage would insect W and X be in, on the 21st day of their life cycles?

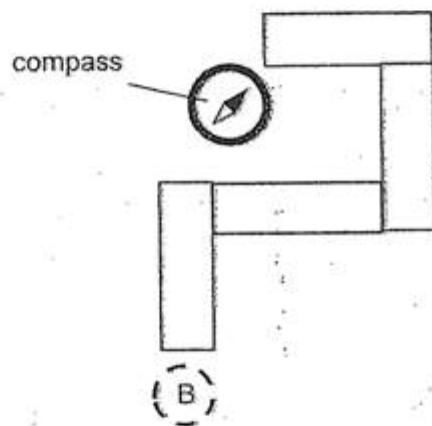
	Insect W	Insect X
(1)	Larva	Larva
(2)	Larva	Pupa
(3)	Pupa	Larva
(4)	Pupa	Pupa

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

A compass has a small magnet that can rotate freely as shown.



Four bar magnets were arranged such that they were attracted to one another. A compass was then placed near end A and the direction of the compass needle is as shown below.



What would be the direction of the needle when the compass was placed at position B?

(1)



(2)



(3)

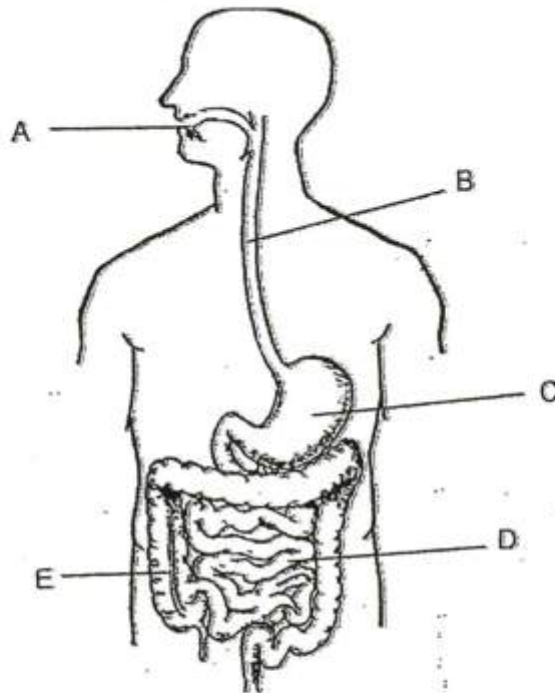


(4)



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

Study the human digestive system below.

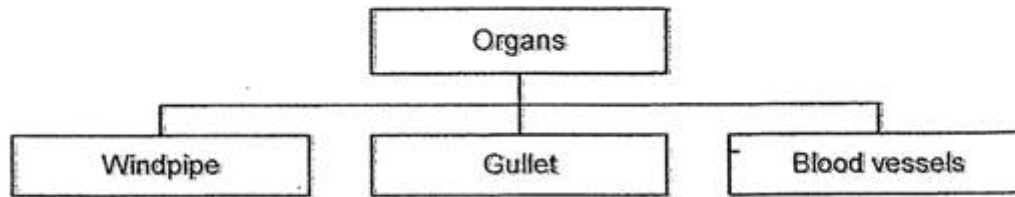


Which of the following correctly identifies organ E and its function?

	Organ E	Function
(1)	Large intestine	Removes water.
(2)	Large intestine	Digests food completely.
(3)	Small intestine	Absorbs digested food into the blood.
(4)	Small intestine	Breaks down food into simpler substances.

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

The classification chart below shows three body organs from different human body systems.

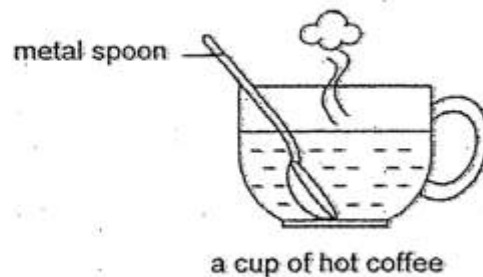


Which one of the following matches the human body systems to the respective organs correctly?

	Windpipe	Gullet	Blood vessels
(1)	Respiratory	Circulatory	Digestive
(2)	Digestive	Respiratory	Circulatory
(3)	Respiratory	Digestive	Circulatory
(4)	Circulatory	Respiratory	Digestive

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

Kumar places a metal spoon into a cup of hot coffee.



The spoon becomes hot after a while. Which one of the following explains why?

- A) The cup loses heat to the spoon
 B) The spoon loses heat to the hot coffee
 C) The hot coffee gains heat from the spoon
 D) The spoon gains heat from the hot coffee

The table below shows the properties of three matters P, Q and R.

Properties	Matter		
	P	Q	R
Has a definite volume	✓	X	✓
Has a definite shape	✓	X	X
Can be compressed	X	✓	X

Which of the following best represent P, Q and R?

	P	Q	R
(1)	plasticine	milk	wind
(2)	oil	wind	aluminum foil
(3)	aluminum foil	air	oil
(4)	wind	oil	plasticine

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

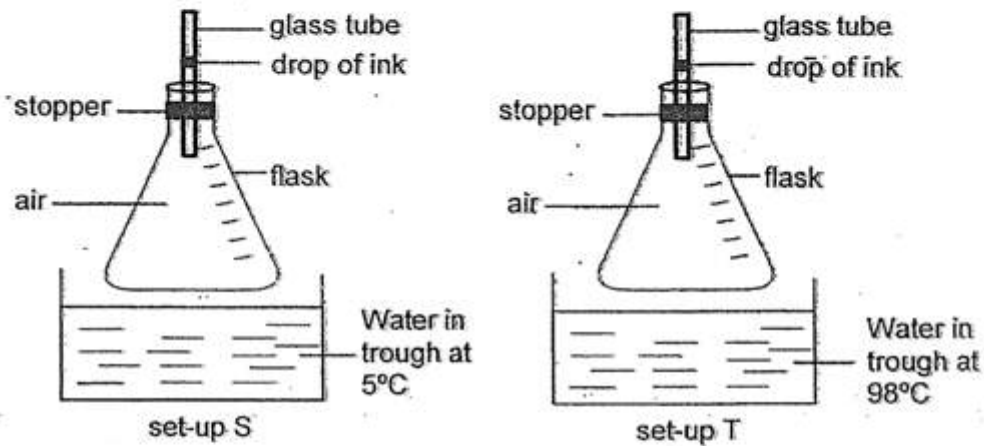
Hashim fried an egg in a pan as shown in the diagram below.



He is able to hold the frying pan using the plastic handle. This is because plastic is a _____.

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

Adeline carried out an experiment with two set-ups, S and T, as shown in the diagram below. Both set-ups were placed in the Science laboratory with a room temperature of 27°C.

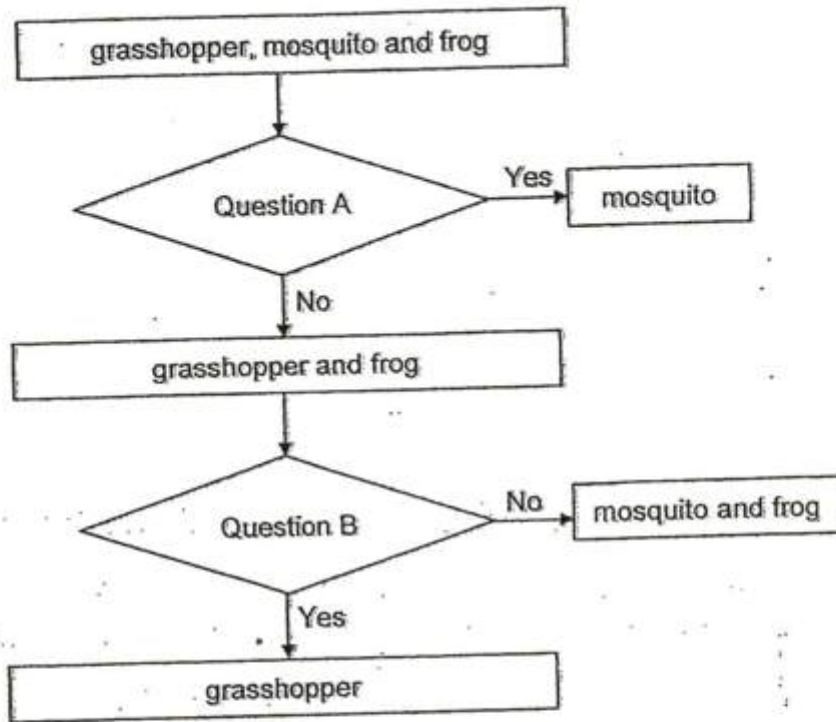


Which of the following would be observed two minutes after the flask was placed in the trough of water in set-ups S and T?

	Observation for set-up S	Observation for set-up T
(1)	The drop of ink will rise.	The drop of ink will fall.
(2)	The drop of ink will fall.	The drop of ink will rise.
(3)	The water level in the trough will rise.	The water level in the trough will fall.
(4)	The water level in the trough will fall.	The water level in the trough will rise.

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

Mei Ling classified the three animals with the help of a flow chart as show below.

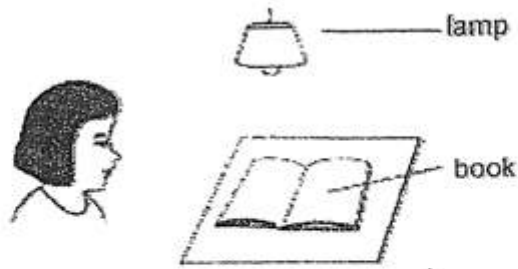


What are the two questions?

	Question A	Question B
(1)	Does it have four-stage life cycle?	Does it have a young stage?
(2)	Does it have four-stage life cycle?	Does the adult look like the young?
(3)	Does it have three-stage life cycle?	Does the adult look like the young?
(4)	Does it have three-stage life cycle?	Does the adult lay eggs in water?

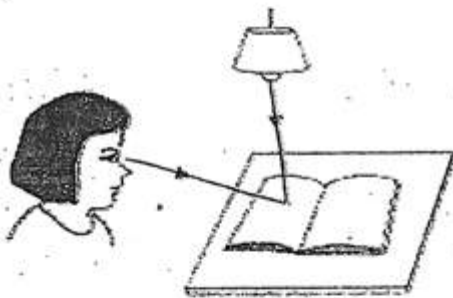
- A) 1
- B) 2
- C) 3
- D) 4

Look at the picture below.

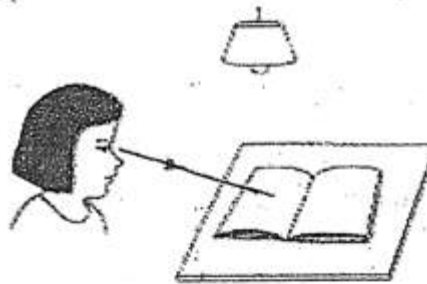


Which one of the following shows how Sue can see the book on the table?

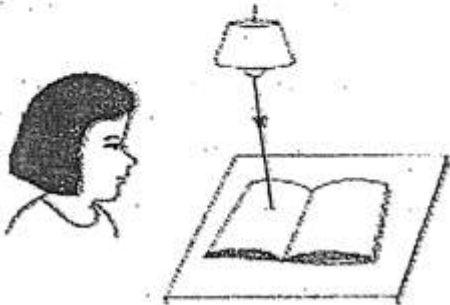
(1)



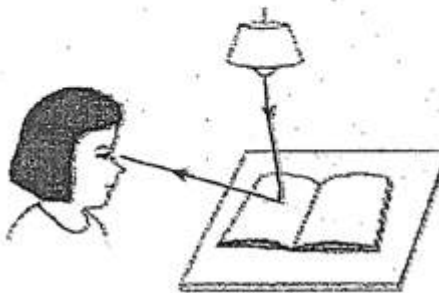
(2)



(3)

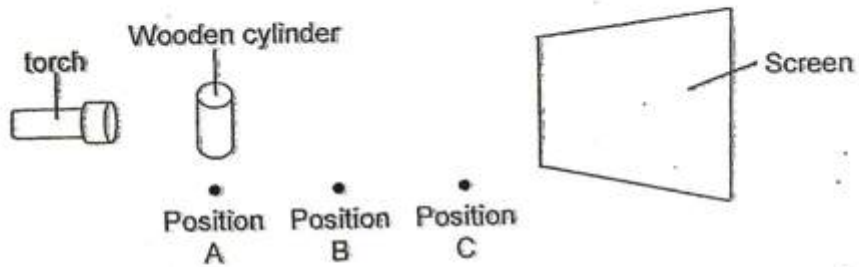


(4)



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

Nicholas shone a torch on a piece of wooden cylinder and a shadow was formed on the screen. He placed the wooden cylinder at positions A, B and C. At each position, he measured the height of the shadow formed on the screen as shown in the diagram below.

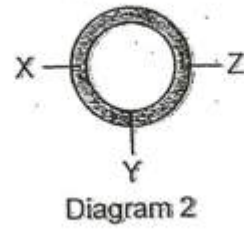
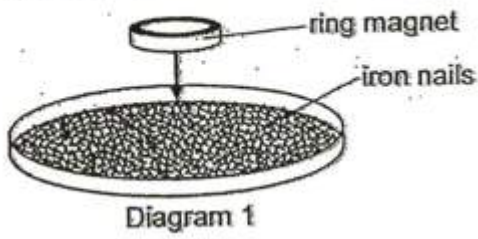


Which of the following correctly represents the results?

Height of shadow (cm)		
Position A	Position B	Position C
(1) 15	7	11
(2) 7	15	11
(3) 15	11	7
(4) 7	11	15

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

Diagram 1 below shows a ring magnet lowered onto a tray of iron nails. Diagram 2 shows the bottom view of a ring magnet.

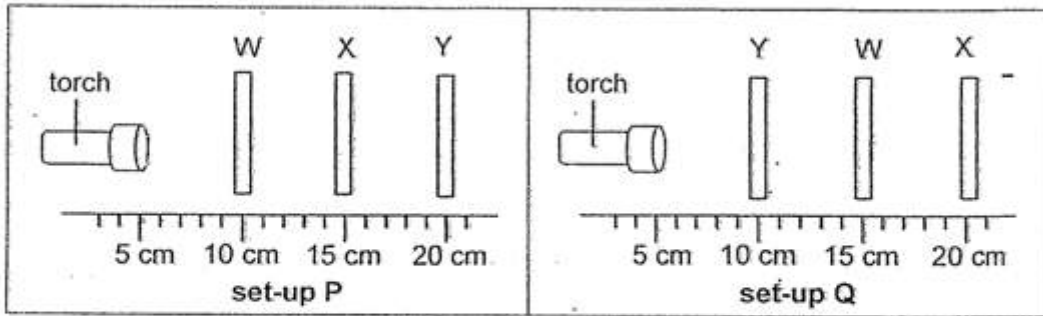


Which one of the following most likely shows the number of iron nails attracted to the bottom of the magnet at Position X, Y and Z?

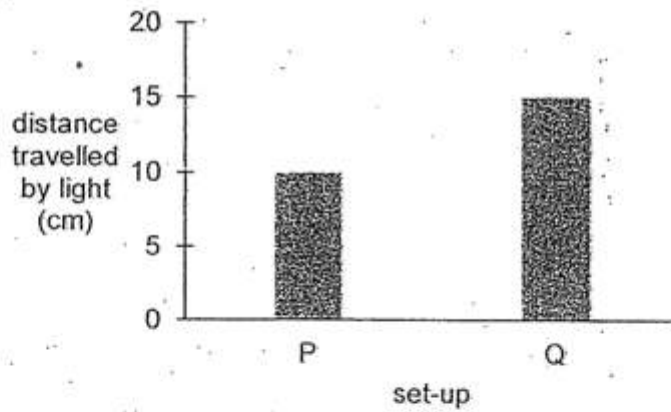
	Position X	Position Y	Position Z
(1)	15	7	11
(2)	7	15	11
(3)	15	15	15
(4)	7	11	15

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

Denise conducted an experiment to investigate the amount of light that could pass through three sheets W, X and Y which were made of different materials. The three different sheets were positioned in two set-ups P and Q as shown in the diagrams below.



The distance travelled by the light for each set-up was measured and the results are shown in the graph below.

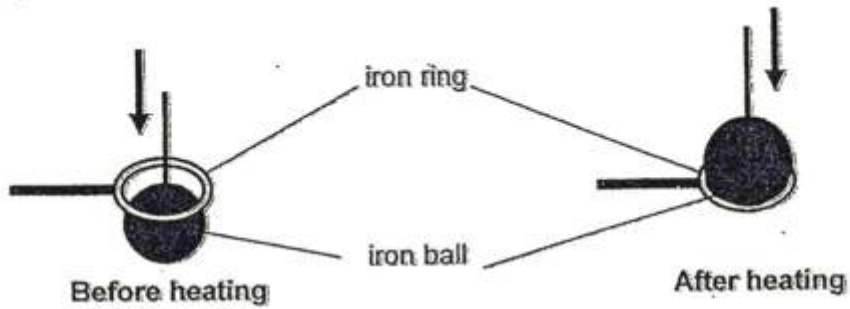


Which of the following correctly describe sheets W, X and Y?

Does it allow light to pass through?			
	W	X	Y
(1)	Yes	Yes	No
(2)	Yes	No	Yes
(3)	Yes	No	No
(4)	No	Yes	Yes

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

The diagram below shows what happened before and after an iron ball was heated.



What could be done to enable the iron ball to pass through the iron ring again?

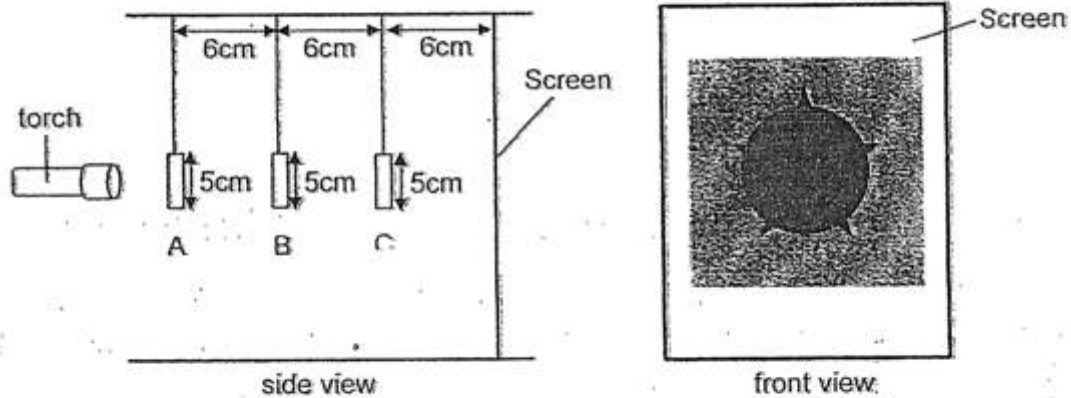
- A Place the iron ball in a beaker of ice water.
- B Place the iron ring in a beaker of ice water.
- C Place the iron ball in a beaker of boiling water.
- D Place the iron ring in a beaker of boiling water.

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

The diagram below shows three shapes, a square, a star and a circle, each made of different materials.



The three cut-outs were then hung in between the torch and a white screen at different positions A, B and C. When the torch was switched on, a shadow was cast on the screen as shown in the diagram below.



Based on the observation of the shadow formed on the screen, which of the following statements are correct?

- A The circle is nearer to the torch than the star.
- B The square is further from the torch than the circle.
- C The star does not allow light to pass through.
- D The square allows more light to pass through than the circle.

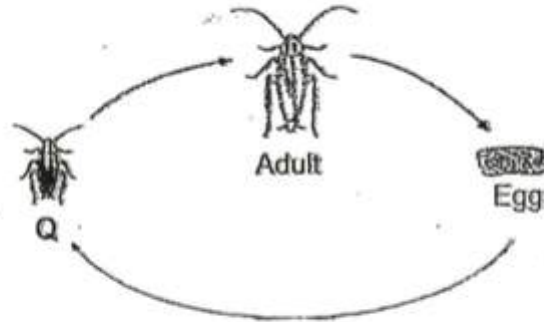
- A) A and C only
- B) A and B only
- C) B and D only
- D) C and D only

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 stages in the life cycle of a cockroach.

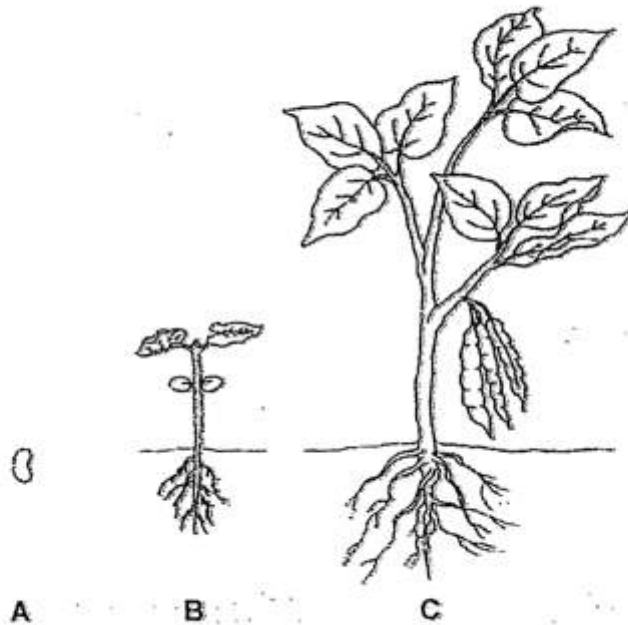


(a) Name stage Q.

[1]

State one other insect that has a similar life cycle as a cockroach

The diagram below shows the stages in the life cycle of a plant.



Choose the correct words from the box to answer the question below.

A: _____

- A) egg
- B) seed
- C) young plant
- D) adult plant

B: _____

- A) egg
- B) seef
- C) young plant
- D) adult plant

The diagrams below show two plants.

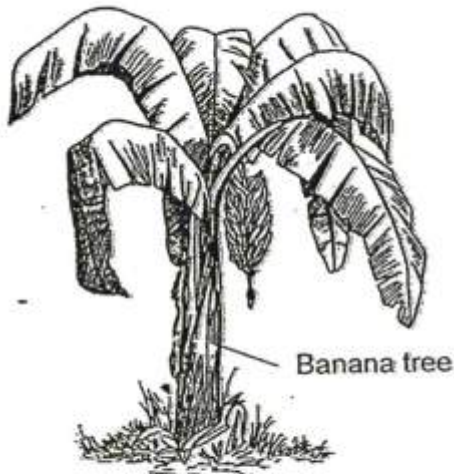


Diagram A



Diagram B

- (a) Based on the diagrams above, which stage of the life cycle are both plants at? Explain your answer. [1]

On diagram A and B, label with the letter "X", the part of the plant that helps support the leaves, flowers and fruits



Diagram A

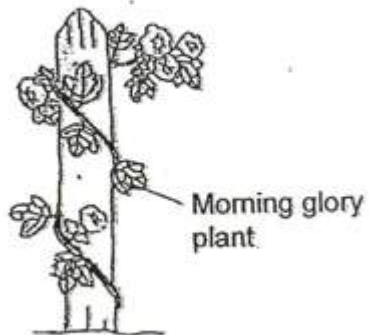


Diagram B

Please type "done" to proceed to the next question

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Primary 4 Science (Term 4) 0 pts

Explain why it is important for the plant labelled in (b) to hold the leaves up in both plants?

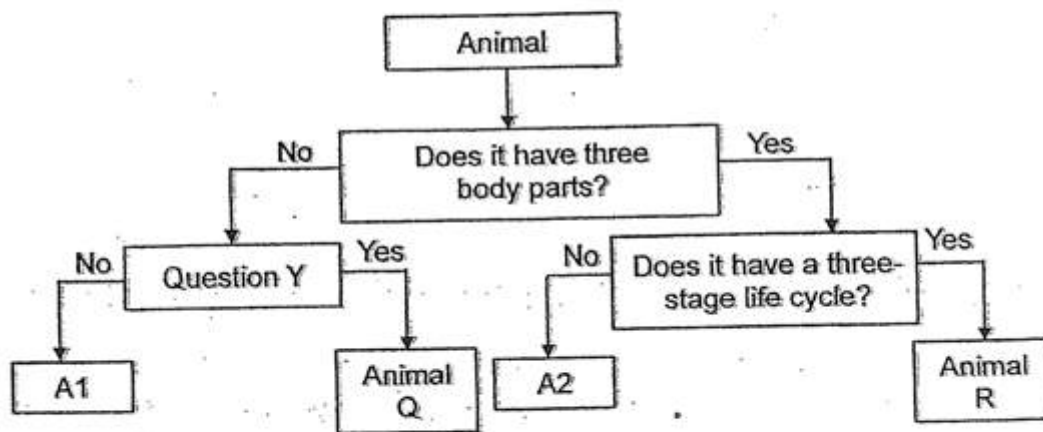
Question 36 of 57

Primary 4 Science (Term 4) 0 pts

The characteristics of animals P, Q, R and S are described in the table below.

Animal	Characteristic(s)
P	It gives birth to young alive.
Q	It breathes through its moist skin and lungs.
R	It has six legs. There are three stages in its life cycle.
S	Its life cycle consists of the egg, larval, pupal and adult stages.

Animal Q and R have been identified in the flow chart shown below.



(a) What would question Y likely be?

[1]

Question Y: _____

Question 37 of 57

Primary 4 Science (Term 4) 0 pts

Which animal, P or S, does A2 represent? Explain your answer.

Question 38 of 57

Primary 4 Science (Term 4)

1 pt

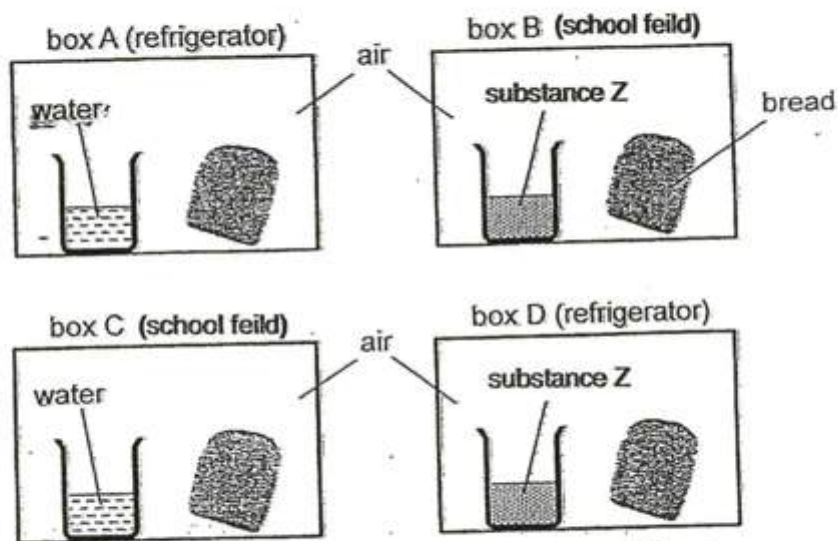
Give an example of animal Q

Question 39 of 57

Primary 4 Science (Term 4)

1 pt

Jerome placed four similar slices of bread in four identical sealed boxes. He placed the boxes A and D in the refrigerator and boxes B and C out in the school field. Substance Z absorbs water from the surrounding.



- (a) After one week, Jerome found black patches growing on the bread in one of the boxes. What are the black patches? [1]
-

Question 40 of 57

Primary 4 Science (Term 4)

0 pts

In which box, A, B, C or D did Jerome find the black patches? Explain why

Question 41 of 57

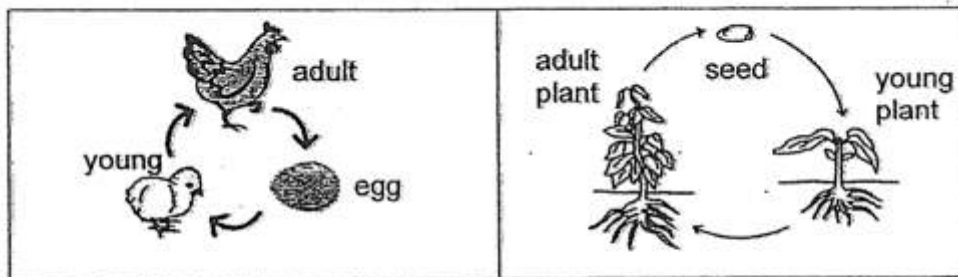
Primary 4 Science (Term 4) 0 pts

Jerome compared his observations of the bread in boxes A and C. What was he trying to find out?

Question 42 of 57

Primary 4 Science (Term 4) 0 pts

The diagram below shows the life cycle of two living things.



- (a) Why is it important for living things to have an adult stage in their life cycle?

[1]

Question 43 of 57

Primary 4 Science (Term 4) 1 pt

Farmer Tan studied the effect of the temperature on the hatching of chicken eggs. The table below shows the results of his study.

Temperature	Number of eggs hatched
35°C	0
36°C	4
37°C	9
38°C	15
39°C	24
40°C	6
41°C	0

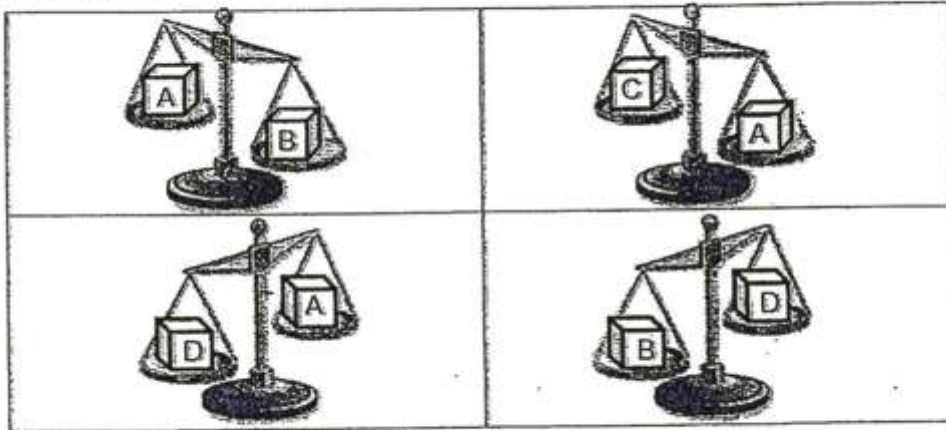
- (b) Based on the results above, what would be the best temperature to hatch the most number of chicken eggs?

[1]

What is the relationship between the temperature and the number of eggs hatched?

Question 45 of 57

The diagram below shows four objects A, B, C and D of identical size placed on a lever balance.



- (a) Arrange the objects according to their mass, beginning with the greatest mass. [1]

Match the options below:

1. [] Greatest mass

A. C

2. [] Great mass

B. D

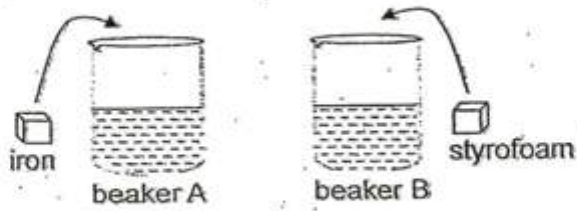
3. [] Small mass

C. A

4. [] Smallest mass

D. B

Penny placed two identical cubes made of different materials, into two beakers; each containing 200 ml of water.



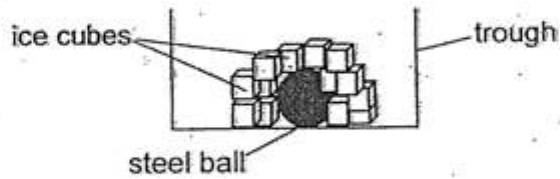
- (b) Penny then observed that the water level in beaker A is higher than in beaker B. Explain why. [2]

Classify the following into matter and non-matter. [3]

thunder	sand	heat
light	petrol	glue

Matter	Non-matter

Mrs Spenser placed a steel ball that was heated to 85°C into the trough. She then placed some ice cubes into it.



- (a) After 10 minutes, Mrs Spenser observed that all the ice cubes melted. Give a reason for her observation.

[1]

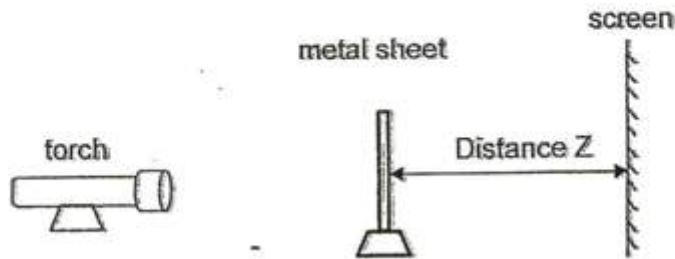
After 10 minutes, Mr Spenser observed that all the ice cubes melted. Give a reason for her observation.

Question 50 of 57

Primary 4 Science (Term 4)

0 pts

Athirah set up an experiment as shown in the diagram below. When she switched on the torch, a shadow of the metal sheet was formed on the white screen.



She wanted to find out how the distance would affect the height of the shadow formed on the white screen. She did not move the torch throughout her experiment.

Athirah recorded her results as shown in the table below.

Distance Z (cm)	Height of shadow (cm)
4	9
8	13
12	19

- (a) What is the relationship between distance Z and the height of the shadow? [1]

Question 51 of 57

Primary 4 Science (Term 4)

0 pts

Explain how the shadow of the metal sheet is formed on the white screen.

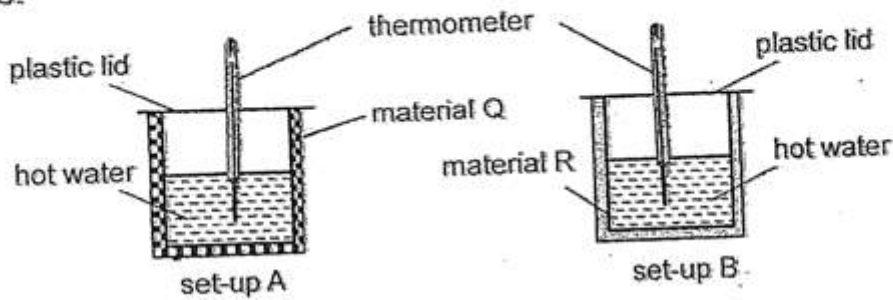
Question 52 of 57

Primary 4 Science (Term 4)

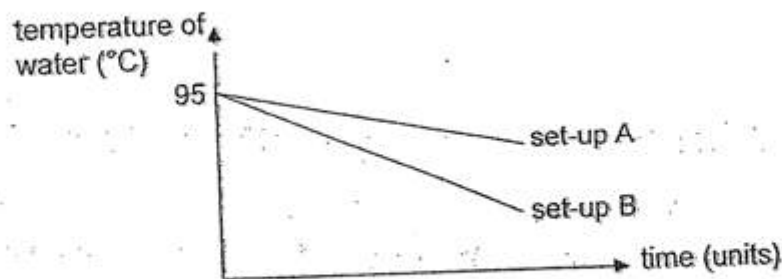
0 pts

Athirah then replaced the metal sheet with a similar sized piece of frosted plastic sheet. Explain how the shadow formed by the frosted plastic sheet is different from the shadow former by the metal sheet.

Sophia conducted an experiment using set-ups A and B as shown below. She wrapped a glass container with material Q and another identical glass container with material R. She filled both containers with the same volume of hot water at 95°C.



Sophia measured the temperature of the water at different times and plotted her results in the graph shown below.



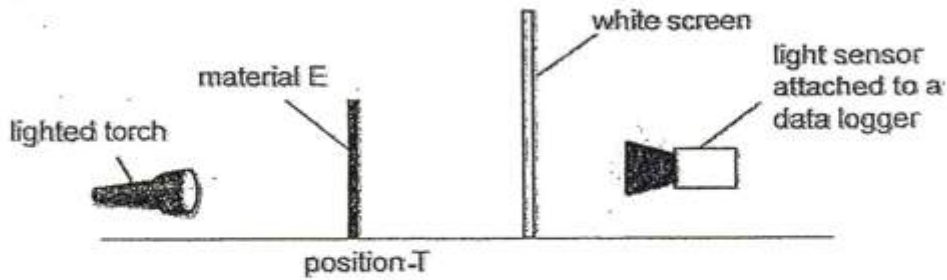
- (a) Based on the graph above, Sophia concluded that material R conducts heat better than material Q. Explain why. [1]

Material Q in set-up A was used to make an oven glove. This material had small air spaces inside it.



- (b) Explain how the air spaces in material Q would help protect the user's hands from hot objects. [2]

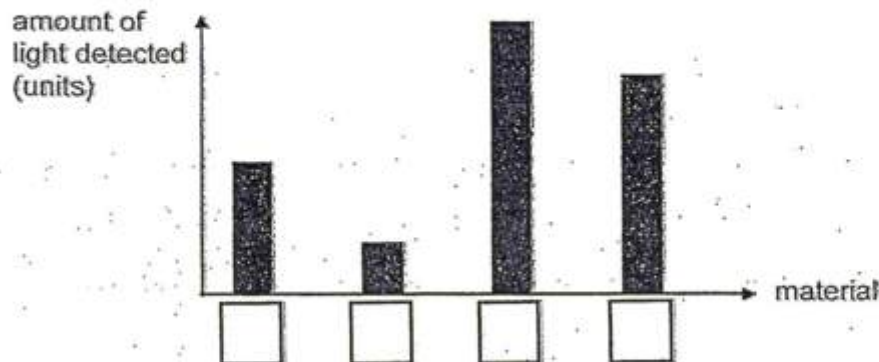
Maurice conducted an experiment in a dark room to compare the degree of transparency of four different materials E, F, G and H as shown in the diagram below.



Maurice placed material E at position T and observed the shadow formed on the white screen. She repeated the same experiment with materials F, G and H. Her observation is recorded in the table below.

Material	Shadow formed
E	light
F	Very dark
G	Dark
H	Very light

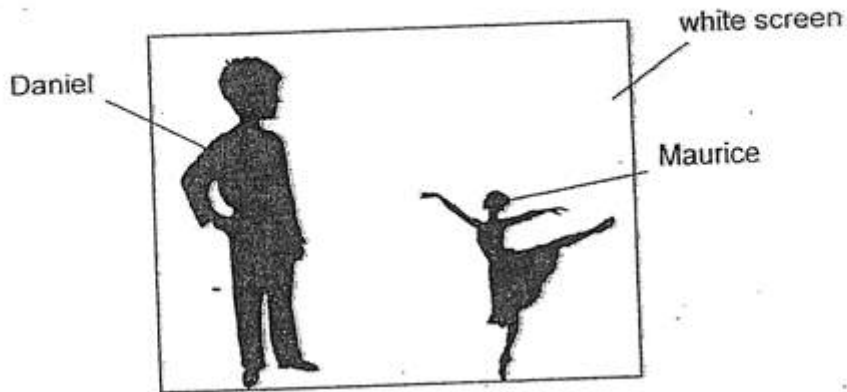
Maurice presented her results in the bar graph below.



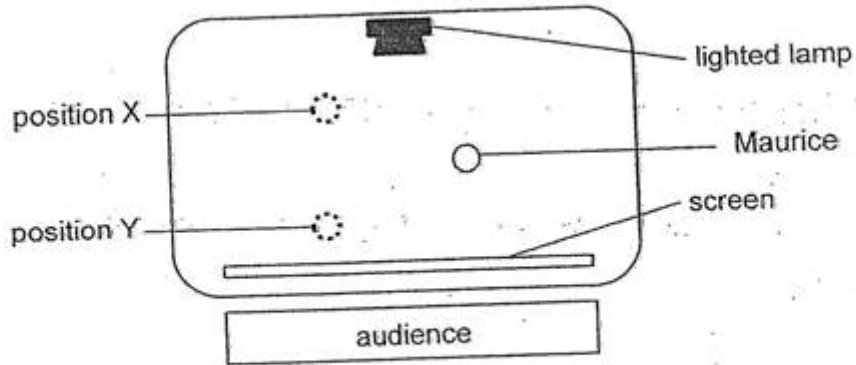
- (a) Based on the results in the table, write the letters E, F, G and H in the boxes provided above. [1]

Based on the results above, which material E, F, G or H is the most suitable to make a pair of swimming google lens? Explain your answer

Maurice put up a shadow performance with her friend, Daniel, who is the same height as her. The diagram below shows what the audience saw on the white screen.



The diagram below shows the layout of the stage for the shadow performance.



(c) At which position, X or Y, was Daniel standing? Explain your answer. [1]