

**Test:** Primary 4 Science (Term 4) - Nan Hua 2020

**Points:** 74 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 59**

Primary 4 Science (Term 4) 2 pts

**For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and choose the correct answer below. (28 x 2 marks = 56 marks)**

Which one of the following statements is true for ALL insects?

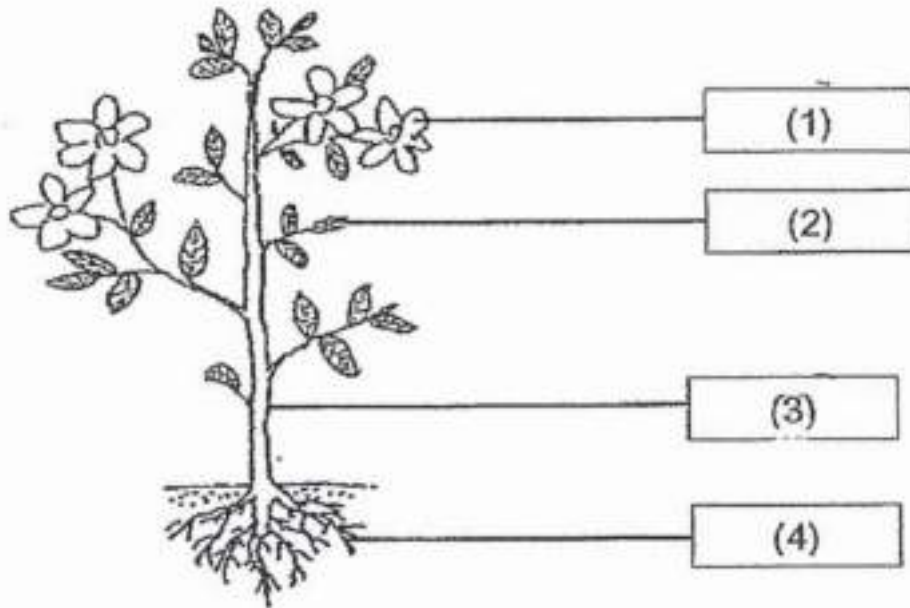
- 
- A)** They have tails.
- B)** They live on land.
- C)** They have wings.
- D)** They have six legs.

**Question 2 of 59**

Primary 4 Science (Term 4)

2 pts

The diagram shows a plant.



Which part, (1), (2), (3) or (4), is the stem?

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

**Question 3 of 59**

Primary 4 Science (Term 4)

2 pts

In which part of the digestive system is food absorbed into the blood?

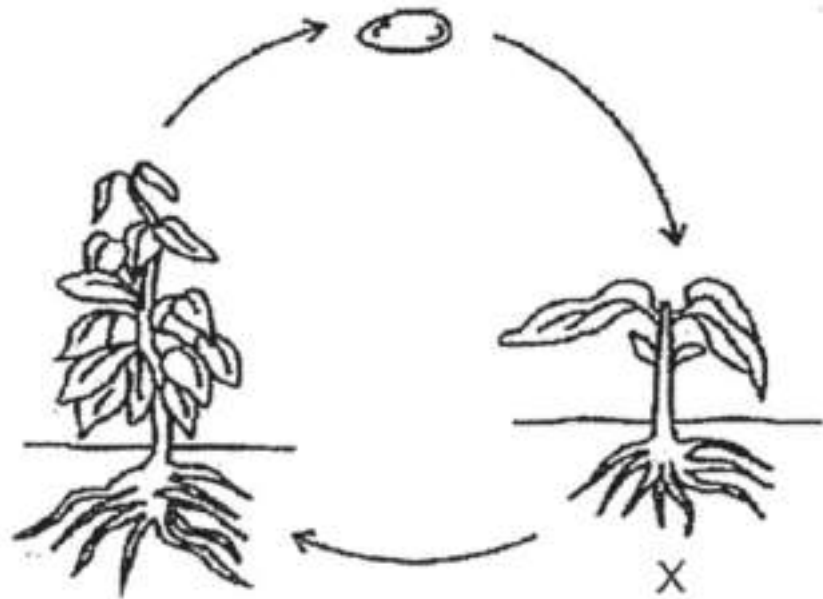
- A) mouth
- B) stomach
- C) small intestine
- D) large intestine

**Question 4 of 59**

Primary 4 Science (Term 4)

2 pts

The diagram shows the life cycle of a plant.



What is the stage marked X?

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

**Question 5 of 59**

Primary 4 Science (Term 4)

2 pts

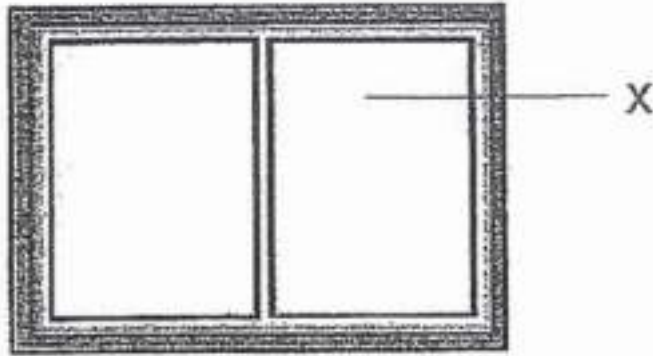
Which animal has a pupa as a stage in its life cycle?

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

**Question 6 of 59**

Primary 4 Science (Term 4) 2 pts

The diagram shows a window inside a bedroom.



Glass is used to make part X because it \_\_\_\_\_.

- A) is flexible
- B) breaks easily
- C) sinks in water
- D) is transparent

**Question 7 of 59**

Primary 4 Science (Term 4) 2 pts

Which one of the following can be attracted by a magnet?

- A) steel ball
- B) rubber ball
- C) ceramic ball
- D) wooden ball

**Question 8 of 59**

Primary 4 Science (Term 4) 2 pts

Which one of the following is NOT a source of heat?

- A) the sun
- B) a candle flame
- C) a pot of hot water
- D) a woollen sweater

**Question 9 of 59**

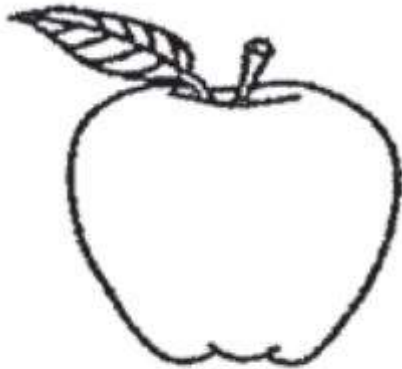
Primary 4 Science (Term 4)

2 pts

Which one of the following is a source of light?

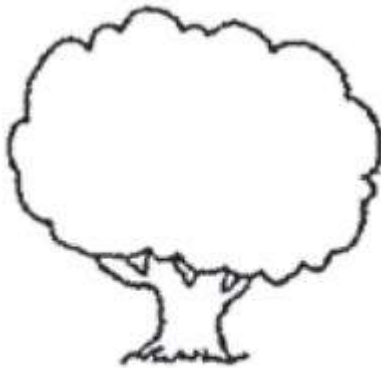
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A)



an apple

B)



a tree

C)



the moon

D)



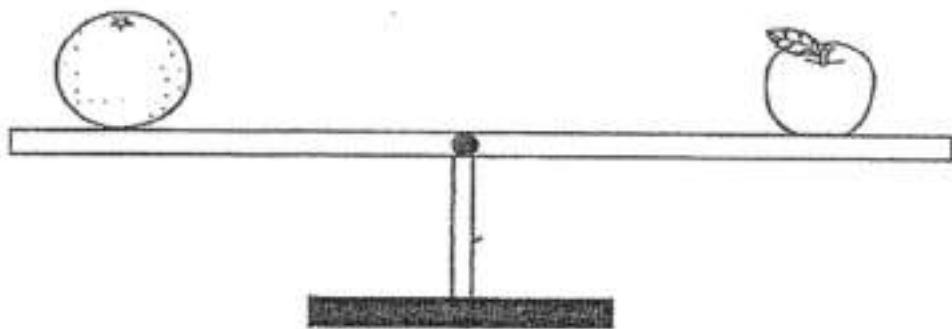
a candle flame

**Question 10 of 59**

Primary 4 Science (Term 4)

2 pts

Study the diagram below.



Which of the following statements is true?

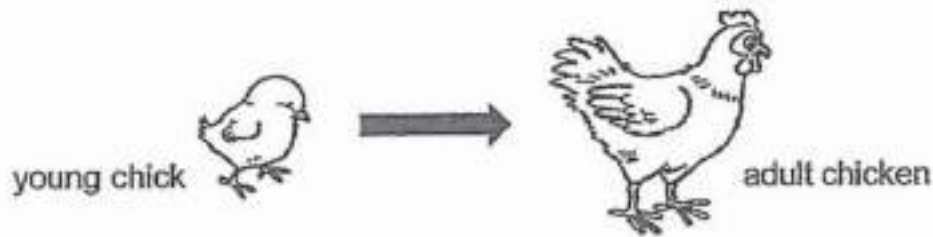
- A) Both fruits have the same size.
- B) Both fruits have the same mass.
- C) Both fruits have the same shape.
- D) Both fruits have the same volume.

## Question 11 of 59

Primary 4 Science (Term 4)

2 pts

The pictures below show a young chick becoming an adult chicken.



This shows that the chicken is a living thing because it \_\_\_\_\_.

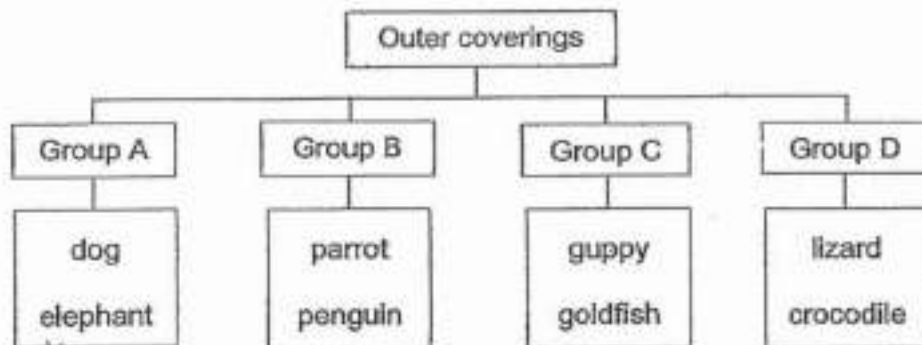
- A) can grow
- B) can reproduce
- C) can respond to changes
- D) needs air, food and water to survive

## Question 12 of 59

Primary 4 Science (Term 4)

2 pts

The classification chart below shows how some animals can be grouped according to their outer coverings.



Animal X has the following characteristics:

Has a beak	Has feathers
Has two wings	Reproduces by laying eggs

Which group should Animal X be placed in?

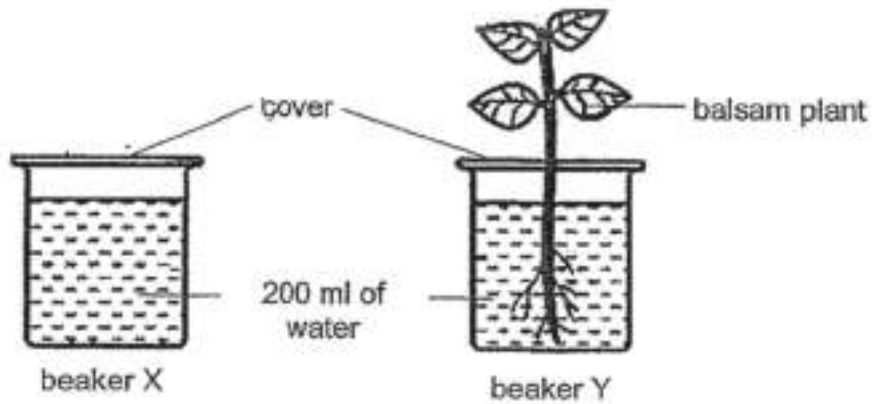
- A) Group A
- B) Group B
- C) Group C
- D) Group D

## Question 13 of 59

Primary 4 Science (Term 4)

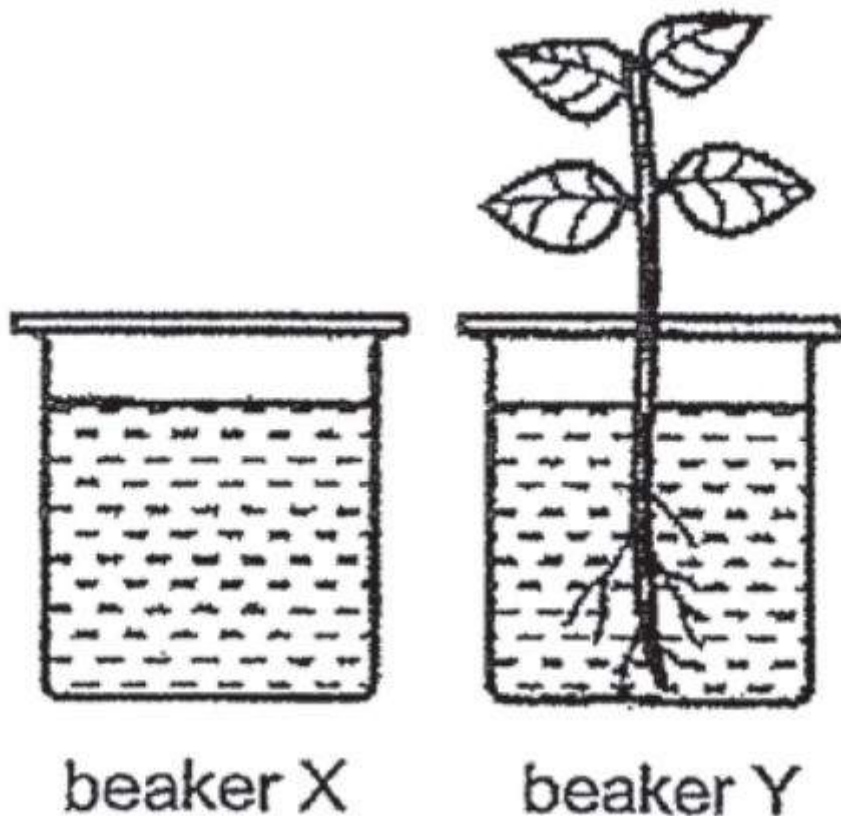
2 pts

Ramesh took two glass beakers, X and Y, and filled each of them with 200 ml of water. He then put a balsam plant in beaker Y only. Both beakers were covered and left by an open window for a few days as shown below.



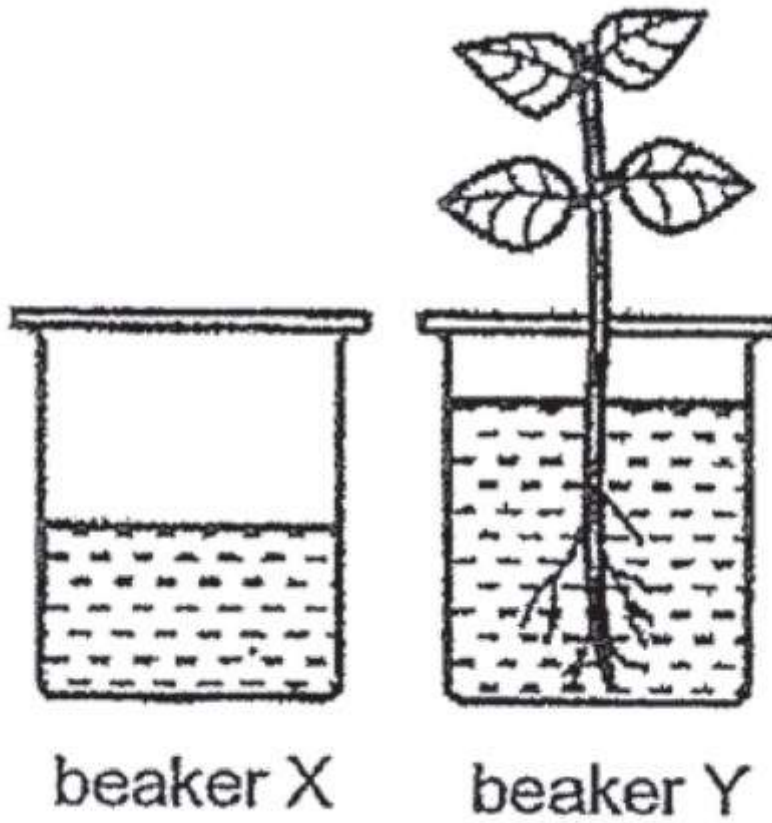
Which of the following sets would he expect to see after a few days?

A)

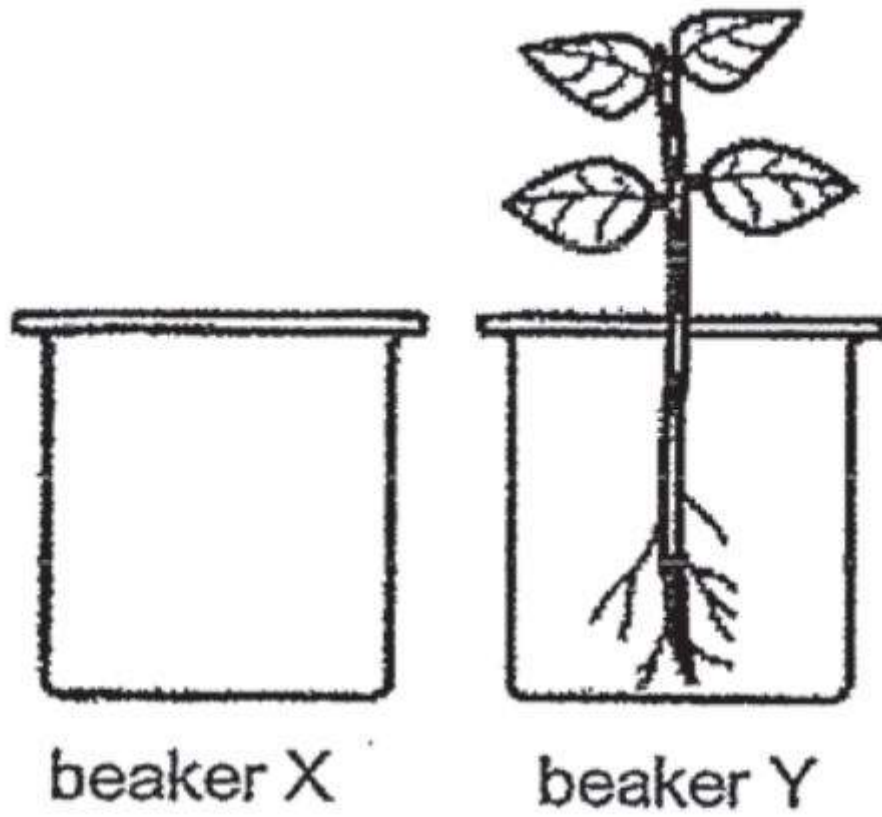


B)

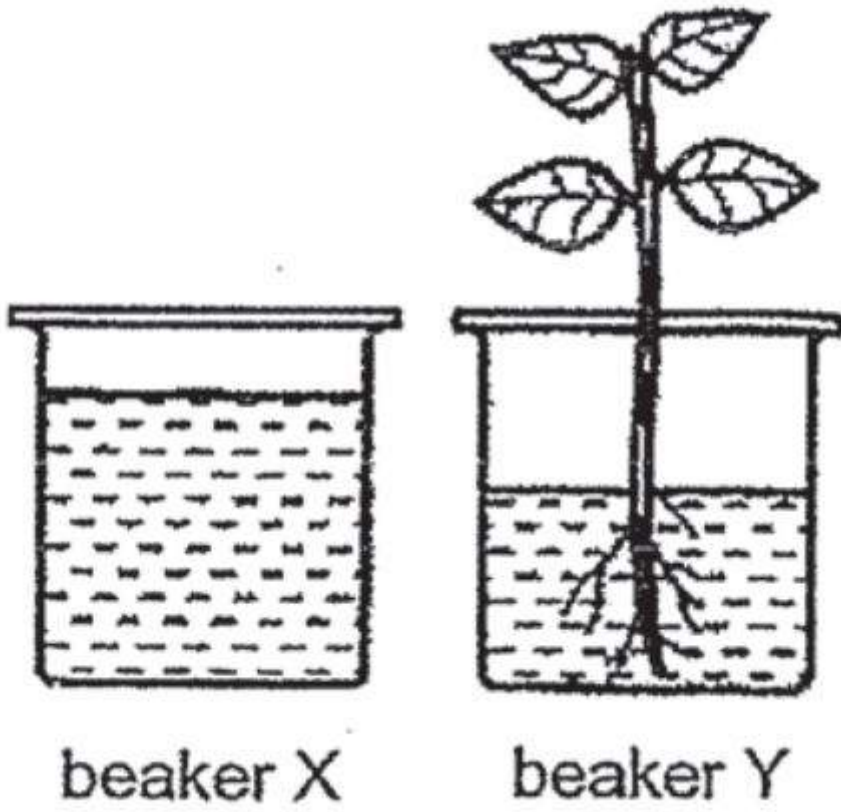




C)



D)

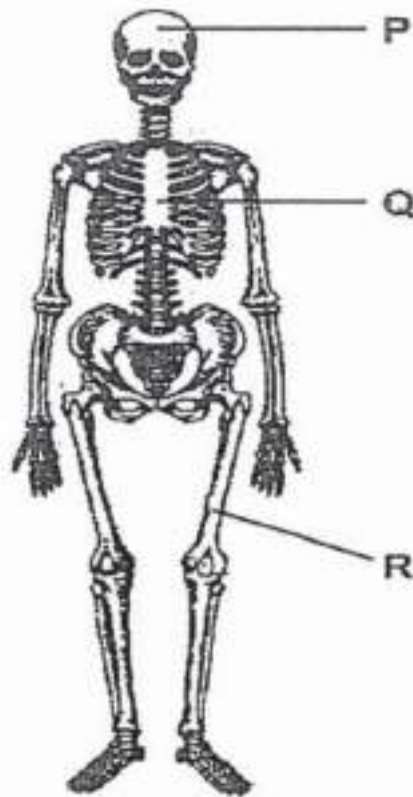


## Question 14 of 59

Primary 4 Science (Term 4)

2 pts

The diagram below shows the human skeletal system.



Which of the following statements about this system is/are true?

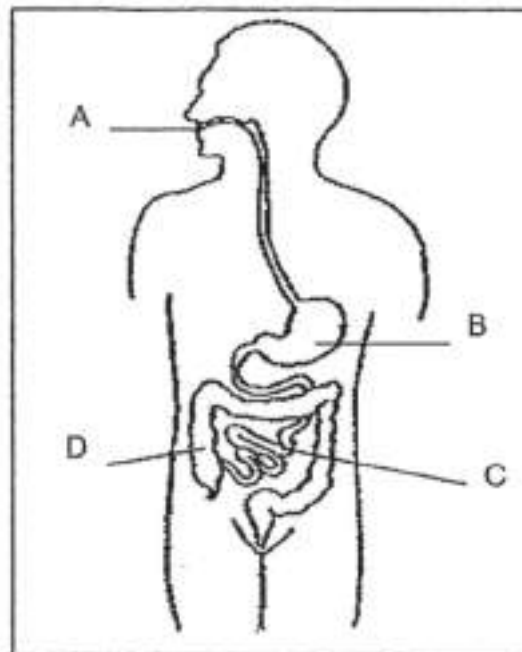
- P protects the brain
- Q protects the heart only
- R gives the body its shape

- 
- A) P and R only
  - B) P and Q only
  - C) Q and R only
  - D) P, Q and R

**Question 15 of 59**

Primary 4 Science (Term 4) 2 pts

The diagram below shows the human digestive system with parts labelled A, B, C and D respectively.



In which parts does digestion start and end respectively?

- A) 

Start	End
A	C
- B) 

Start	End
A	D
- C) 

Start	End
B	C
- D) 

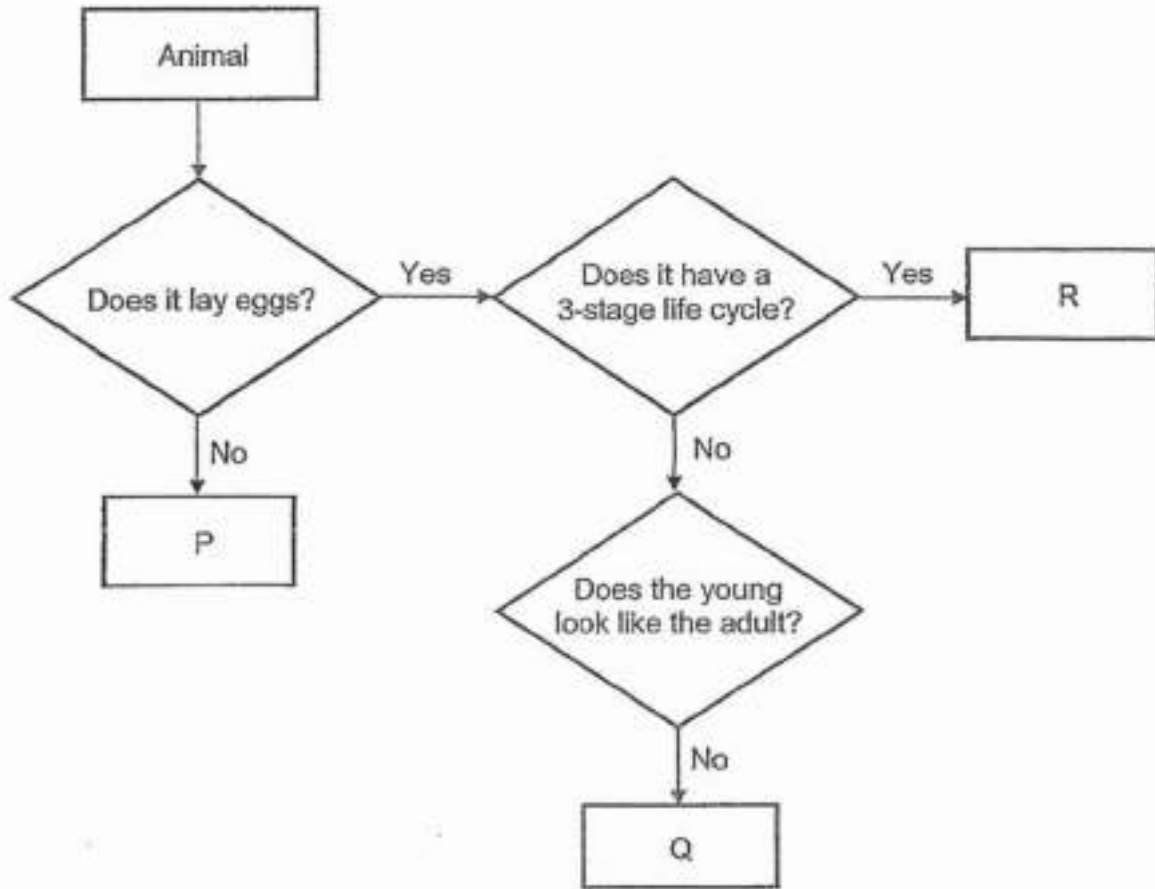
Start	End
B	D

## Question 16 of 59

Primary 4 Science (Term 4)

2 pts

The flow chart shows how animals P, Q and R, are grouped.



Based on the information given above, which one of the following best represents animals P, Q and R?

- A) 

P	Q	R
tiger	mosquito	cockroach
- B) 

P	Q	R
tiger	cockroach	mosquito
- C) 

P	Q	R
chicken	cockroach	mosquito
- D) 

P	Q	R
chicken	mosquito	cockroach

**Question 17 of 59**

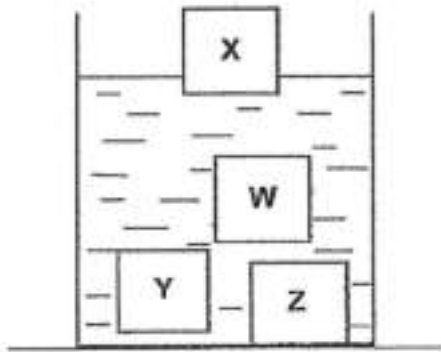
Primary 4 Science (Term 4) 2 pts

Siti wanted to find out which material, W, X, Y or Z, was the most suitable for making a swimming float. She placed the four materials of the same size and shape in a container of water as shown below.

Diagram 1 shows the positions of materials W, X, Y and Z in water.

Diagram 2 shows a boy using a swimming float.

**Diagram 1:**



**Diagram 2:**



Based on the diagram above, which material, W, X, Y or Z, is the most suitable to make the swimming float?

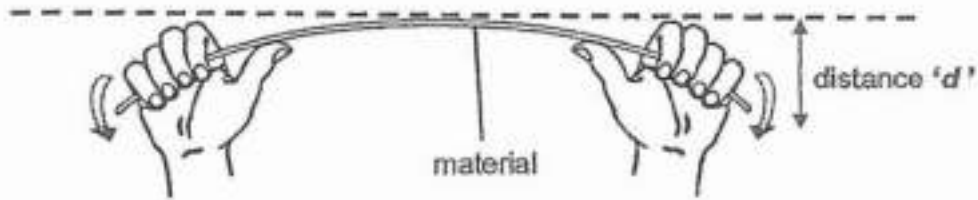
- A) W
- B) X
- C) Y
- D) Z

## Question 18 of 59

Primary 4 Science (Term 4)

2 pts

Sarah carried out a flexibility test on four rods made of different materials, M, N, P and Q. She bent each rod with the same amount of strength. The distance 'd' showed how much each rod could bend.



Material	Distance 'd' (cm)
M	3
N	1
P	9
Q	7

Based on the above results, which material is the most flexible?

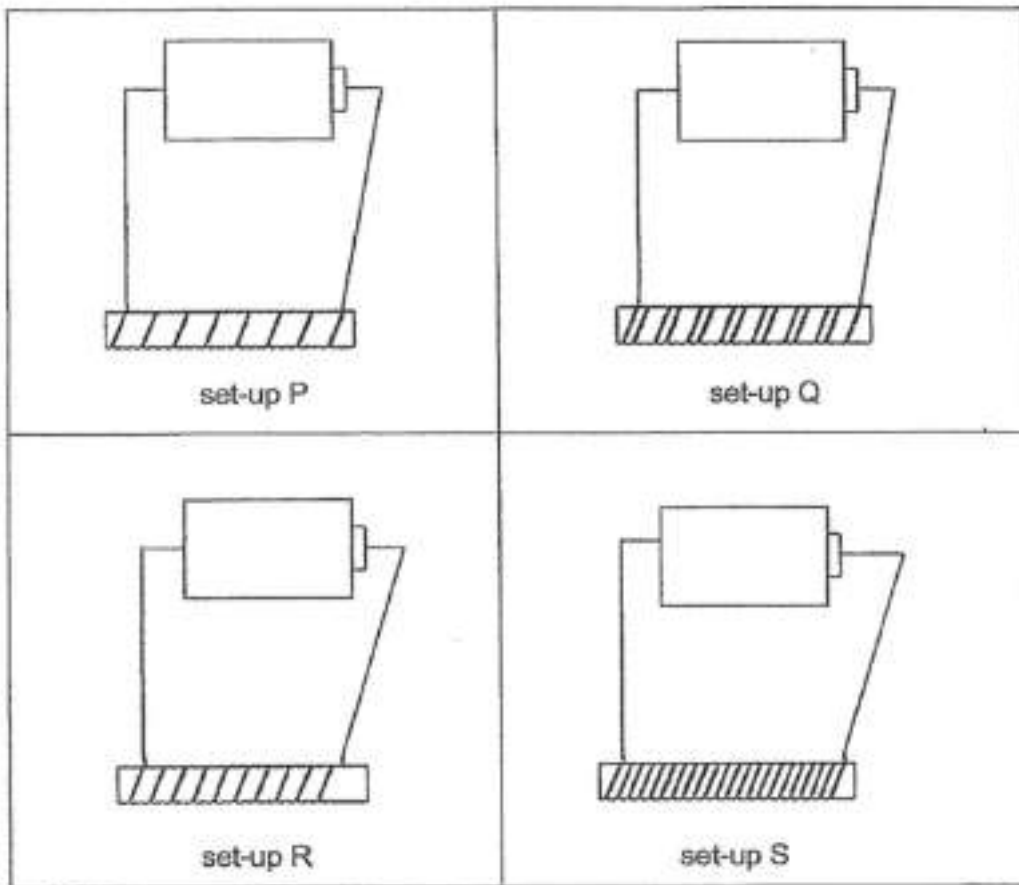
- A) M
- B) N
- C) P
- D) Q

## Question 19 of 59

Primary 4 Science (Term 4)

2 pts

Mikka wanted to find out if the number of coils around an iron rod affects its magnetic strength. When the batteries and the iron rods are connected, the iron rod becomes magnetised.



Which one of the following shows the correct arrangement of the magnetised rod according to their magnetic strengths, starting from the weakest to the strongest?

- A) 

Weakest			Strongest
P	Q	R	S
- B) 

Weakest			Strongest
P	R	Q	S
- C) 

Weakest			Strongest
R	P	Q	S
- D) 

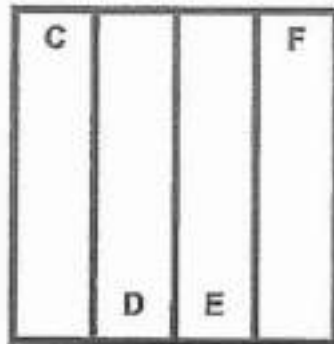
Weakest			Strongest
S	Q	R	P



## Question 20 of 59

Primary 4 Science (Term 4) 2 pts

Four identical bar magnets are arranged such that they are attracted to one another as shown below.



Given that end C is a north pole, what are the poles of D, E and F?

- A) 

D	E	F
S-pole	S-pole	N-pole
- B) 

D	E	F
S-pole	N-pole	N-pole
- C) 

D	E	F
N-pole	N-pole	S-pole
- D) 

D	E	F
N-pole	S-pole	S-pole

## Question 21 of 59

Primary 4 Science (Term 4) 2 pts

The table shows the properties of three types of matter, C, D and E. A tick (✓) indicates that the matter has the property listed.

Matter	Has definite shape	Has definite volume	Can be compressed
C	✓	✓	
D		✓	
E			✓

Which of the following shows the correct states of C, D and E?

- A) 

C	D	E
solid	liquid	gas
- B) 

C	D	E
liquid	solid	solid
- C) 

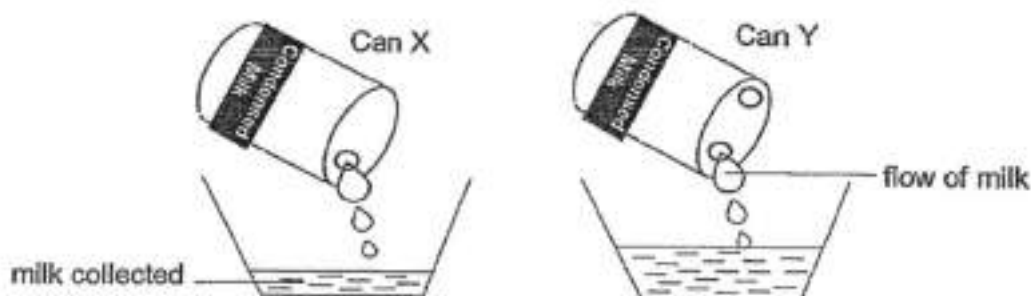
C	D	E
gas	liquid	solid
- D) 

C	D	E
gas	solid	gas

## Question 22 of 59

Primary 4 Science (Term 4) 2 pts

Jane conducts an experiment. She made a hole in Can X and two holes in Can Y. When she poured out the condensed milk, she noticed that the condensed milk in Can Y flowed out faster than the condensed milk in Can X.



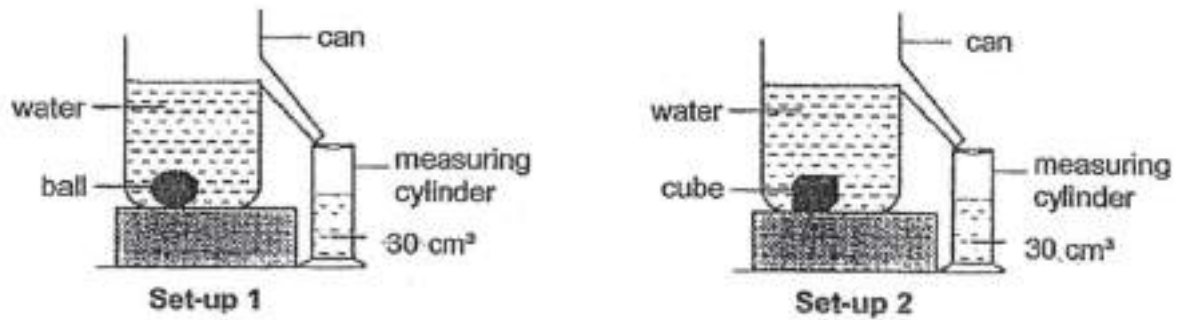
What could be a possible reason for this observation?

- A) Condensed milk in Can X occupies more space.
- B) Some milk spilled out from the second hole in Can Y.
- C) Some milk became solid and could not come out of the hole in Can X.
- D) More air could enter Can Y thus occupying the space previously occupied by the milk.

**Question 23 of 59**

Primary 4 Science (Term 4) 2 pts

A ball and a cube were lowered into two cans filled with water as shown in Set-up 1 and Set-up 2 respectively. The water that overflowed was collected in the measuring cylinders as shown below.



This activity shows that both the ball and cube have the \_\_\_\_\_.

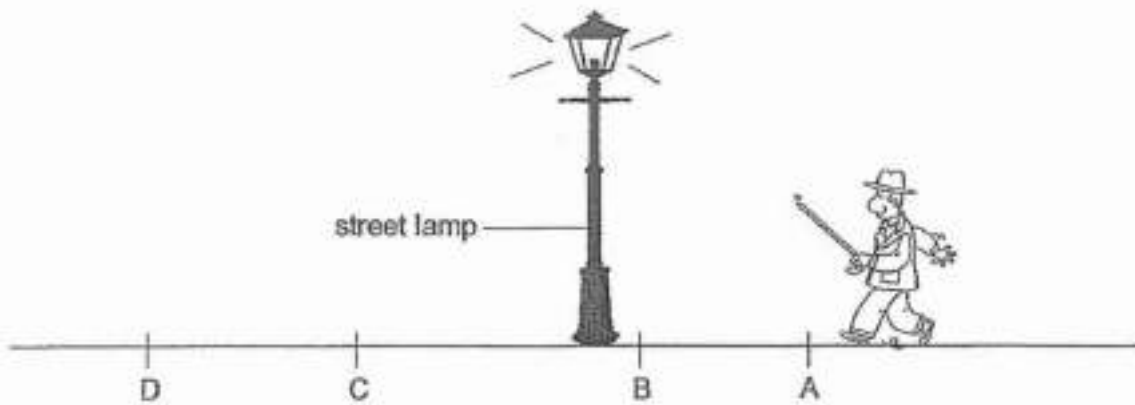
- A) same mass
- B) same volume
- C) same mass and volume
- D) same mass but different states

## Question 24 of 59

Primary 4 Science (Term 4)

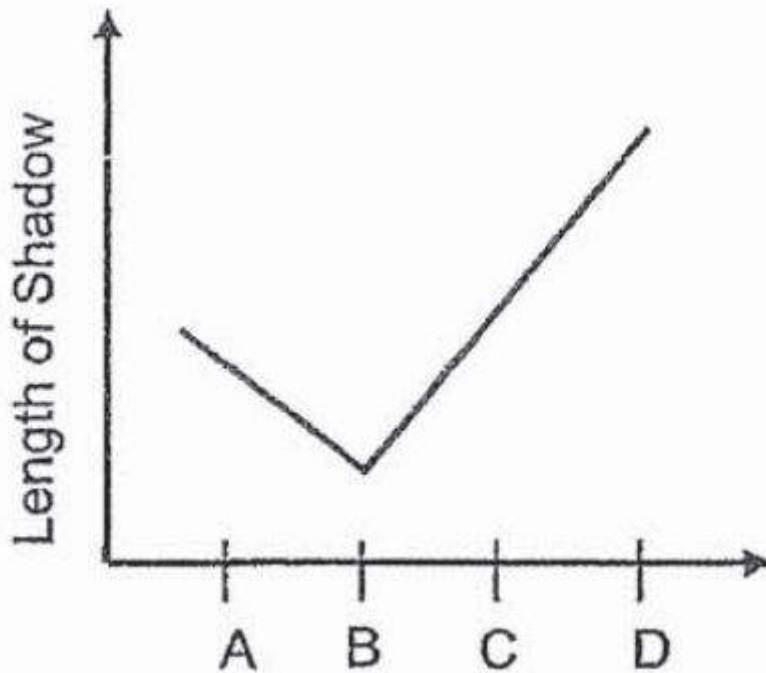
2 pts

The diagram below shows a man walking on the street at night.

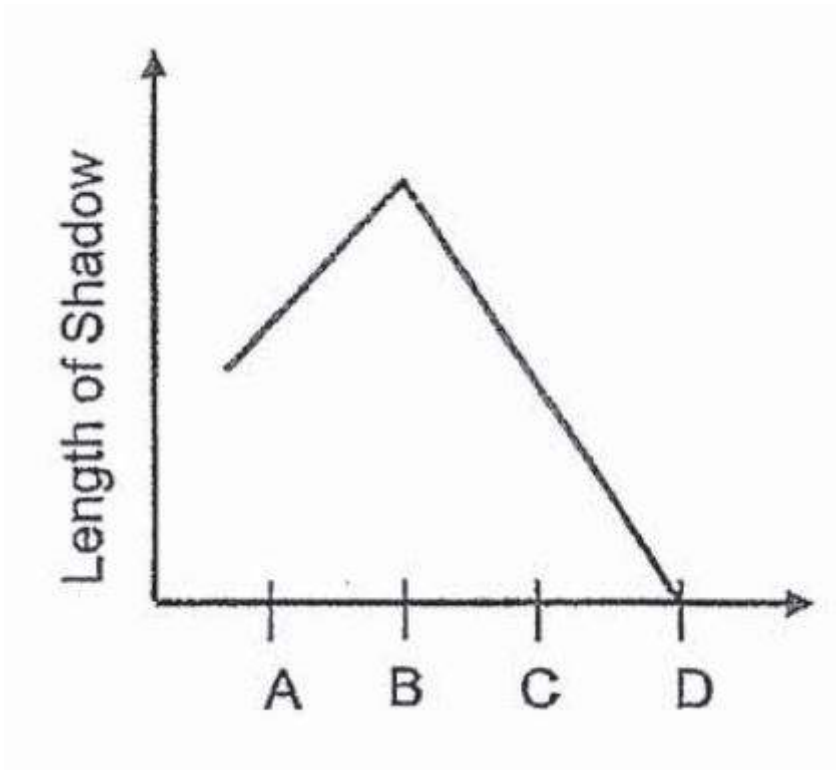


Which one of the following graphs shows how the length of the man's shadow changes from A to D under the lit street lamp?

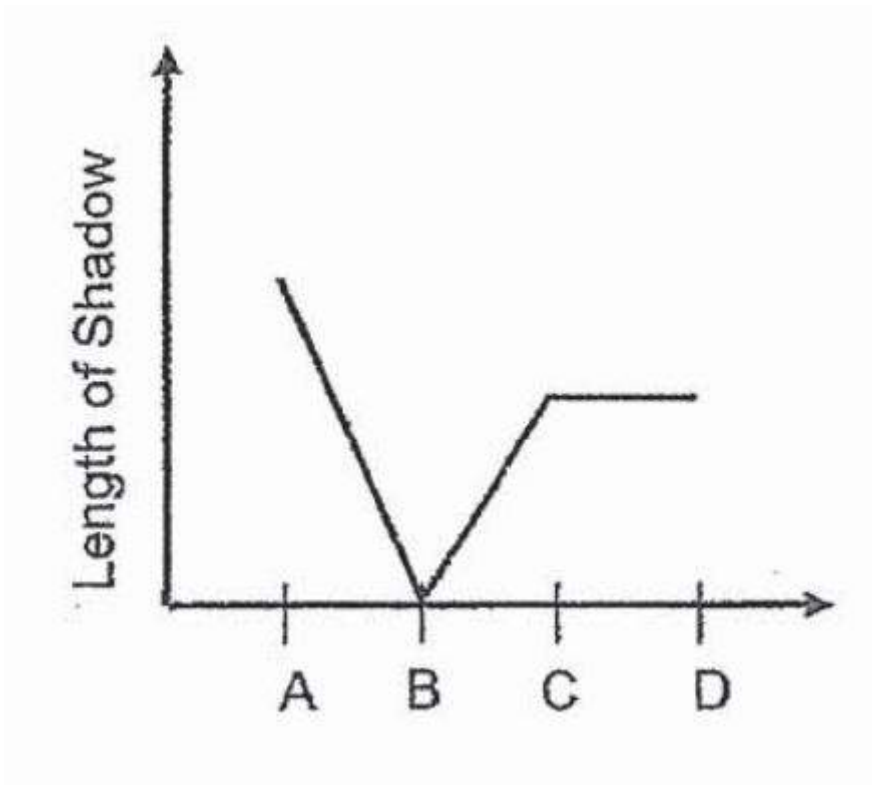
A)



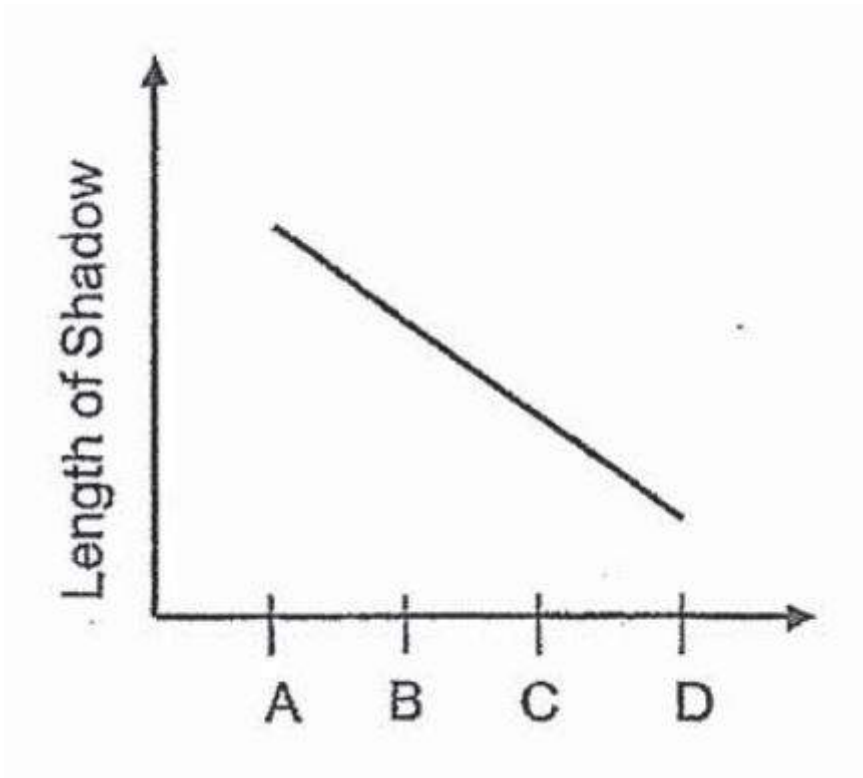
B)



C)



D)

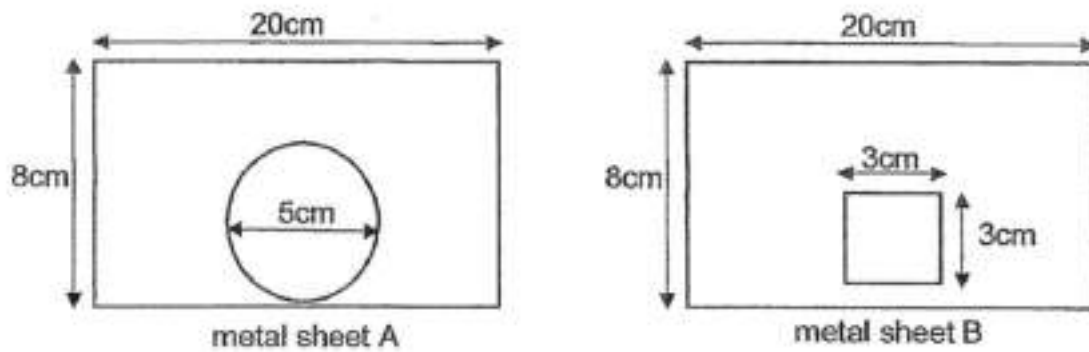


## Question 25 of 59

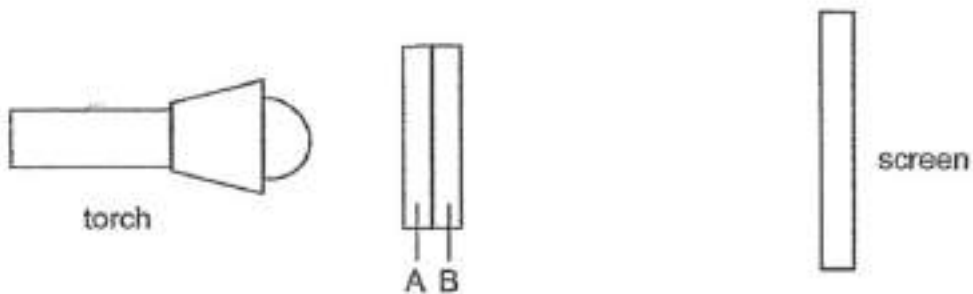
Primary 4 Science (Term 4)

2 pts

Justin cut out a circle and a square from each metal sheet as shown below.

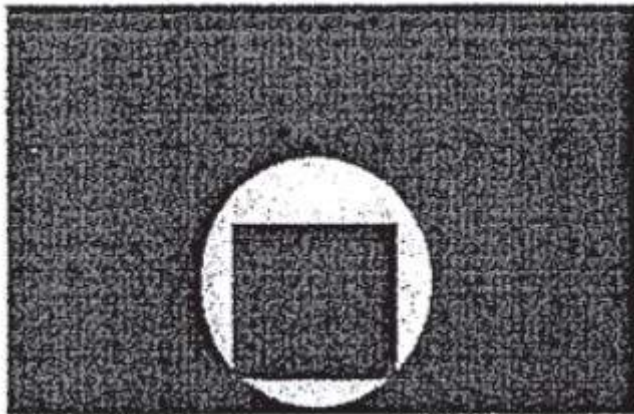


He then glued both rectangular sheets together and placed them between a torch and a screen and conducted the experiment in a dark room as shown below.

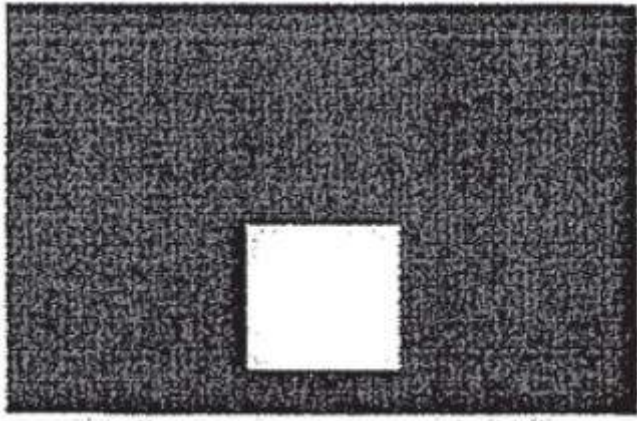


Which of the following could be the shadow cast on the screen?

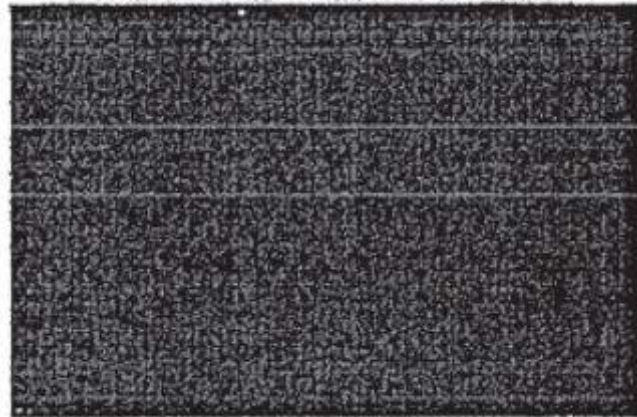
A)



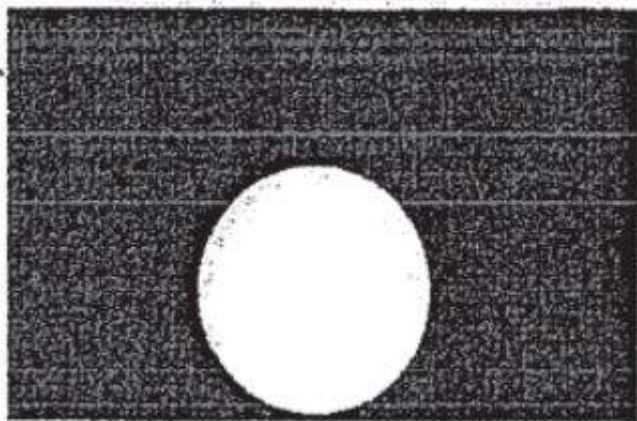
B)



C)



D)



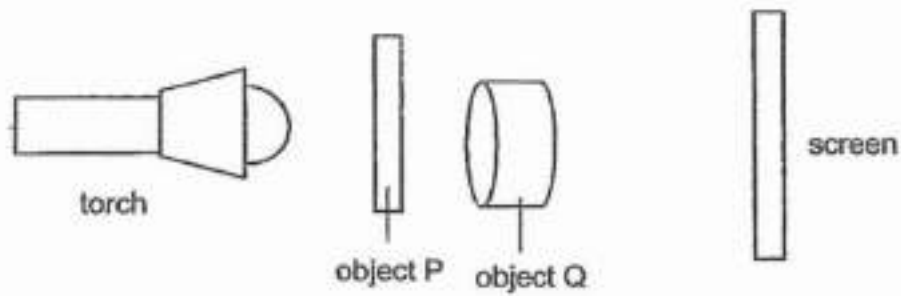


## Question 26 of 59


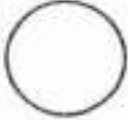
Primary 4 Science (Term 4)

2 pts

Object Q was placed behind object P as shown in the diagram below.

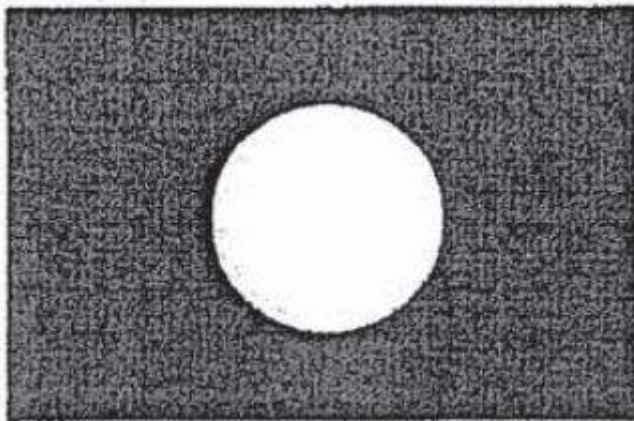


The properties of the objects P and Q are shown in the table below.

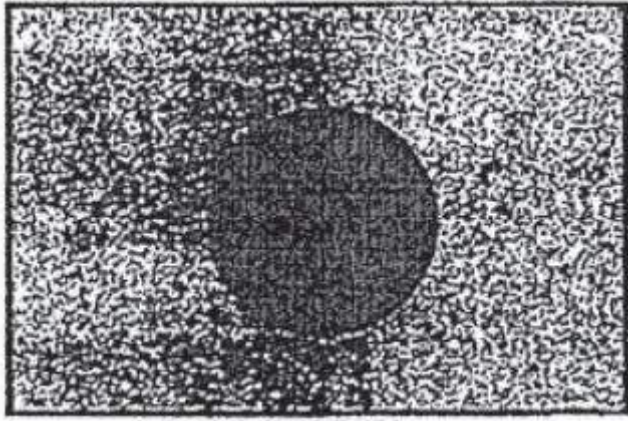
Object	Shape of object	Does the object allow any light to pass through?
P		Some
Q		No

Which one of the following diagrams shows correctly the shadow cast on the screen?

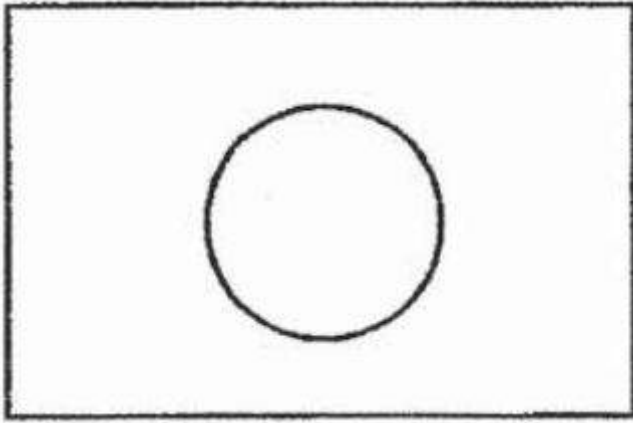
A)



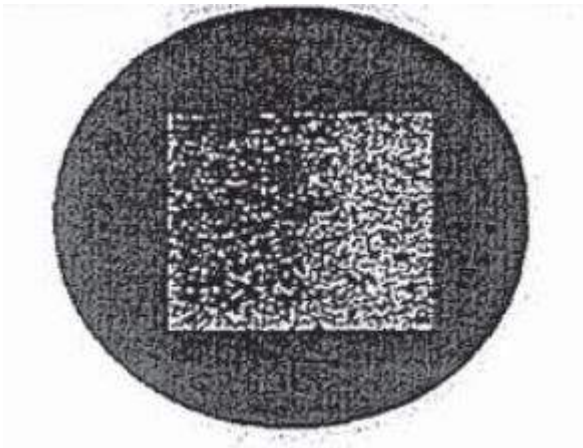
B)



C)



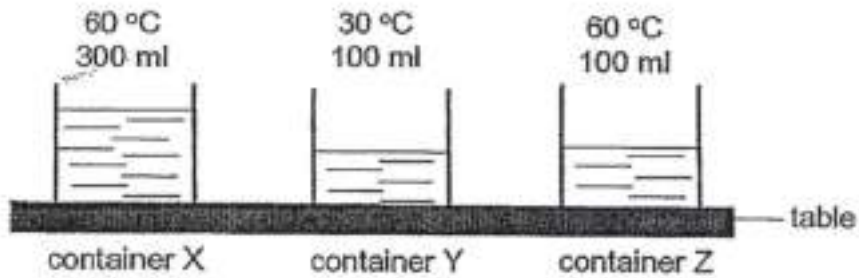
D)



**Question 27 of 59**

Primary 4 Science (Term 4) 2 pts

Ellie poured some water into container X, Y and Z as shown below. All 3 containers are identical and they are placed in the same room as shown below.



Which two statements are correct? .

- A Water in Container X has the most amount of heat.
- B Water in Container X and Container Z have the same amount of heat.
- C Water in Container Z has more heat than water in Container Y.
- D Water in all three containers have the same amount of heat.

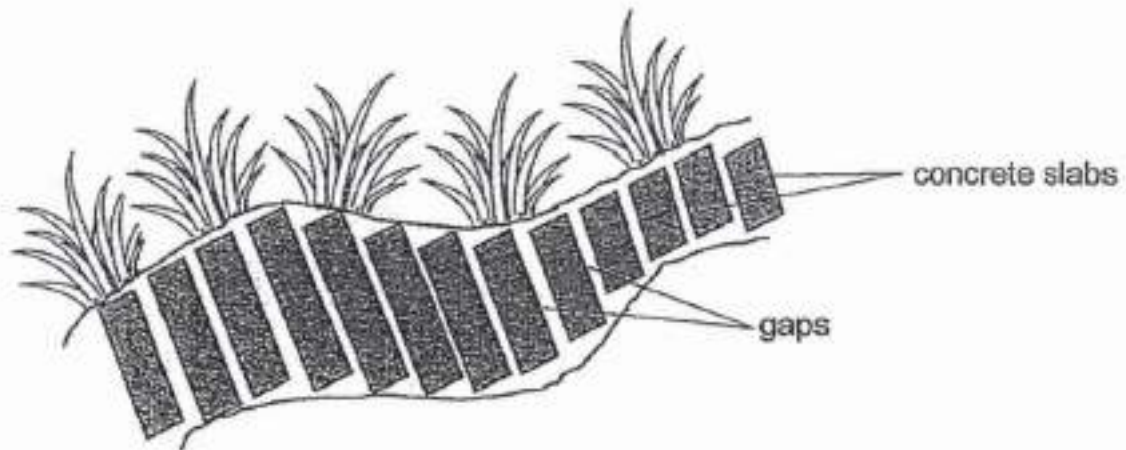
- 
- A) A and B
  - B) A and C
  - C) B and C
  - D) C and D

**Question 28 of 59**

Primary 4 Science (Term 4)

2 pts

There were gaps between the concrete slabs on the pavement in the park.



What is the purpose of these gaps?

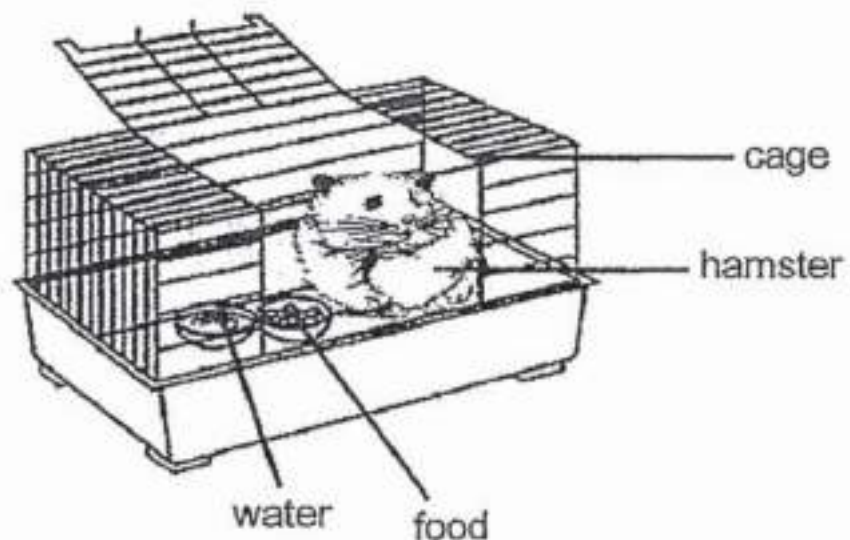
- A) to allow the concrete slabs to look beautiful
- B) to allow the concrete slabs to dry faster after rain
- C) to allow for expansion of concrete slabs on a hot day
- D) to allow for contraction of the concrete slabs on a cold day

**Question 29 of 59**

Primary 4 Science (Term 4)

1 pt

Study the diagram below.



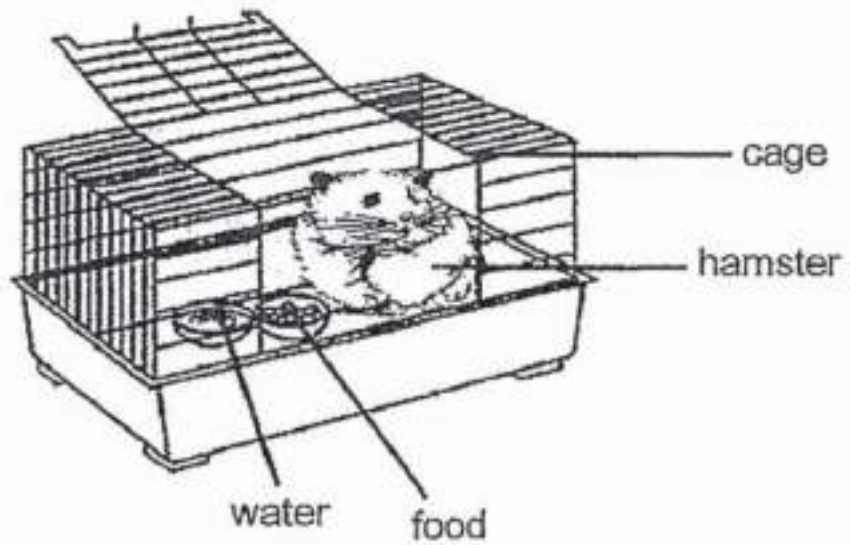
After five days, will the amount of water in the bowl increase, decrease or remain the same?

**Question 30 of 59**

Primary 4 Science (Term 4)

1 pt

Study the diagram below.



Based on the diagram above, other than food, name another substance this hamster needs so that it remains alive.

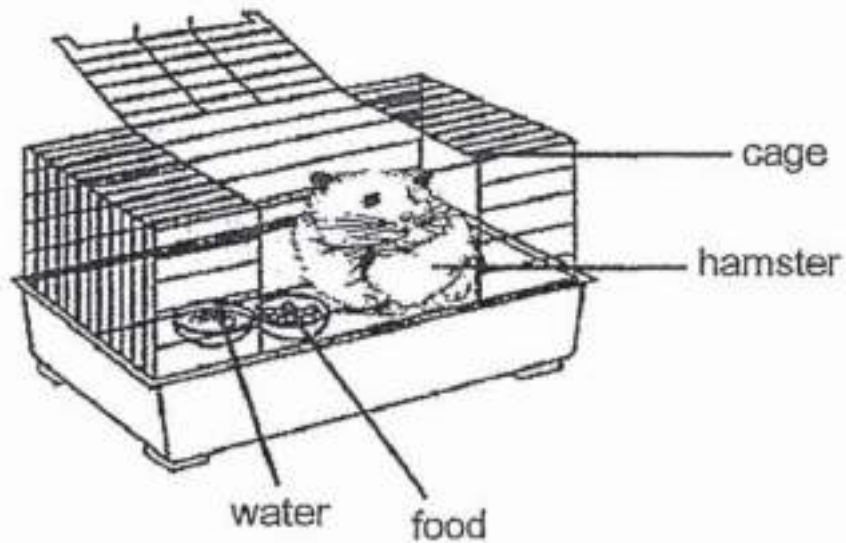
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**Question 31 of 59**

Primary 4 Science (Term 4)

0 pts

Study the diagram below.



Sandy opened the cage and wanted to hold her pet hamster. However, the hamster moved away. What characteristic of living things does this show?  
(1 mark)

*This question 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.*

**Question 32 of 59**

Primary 4 Science (Term 4)

1 pt

Sarah places a magnet near an iron nail. The iron nail moves towards the magnet.



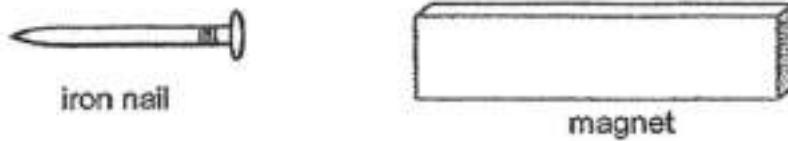
This shows that the magnet exerts a \_\_\_\_\_ on the iron nail.

**Question 33 of 59**

Primary 4 Science (Term 4)

1 pt

Sarah places a magnet near an iron nail. The iron nail moves towards the magnet.



Based on the experiment, Sarah can conclude that iron is a \_\_\_\_\_ material.

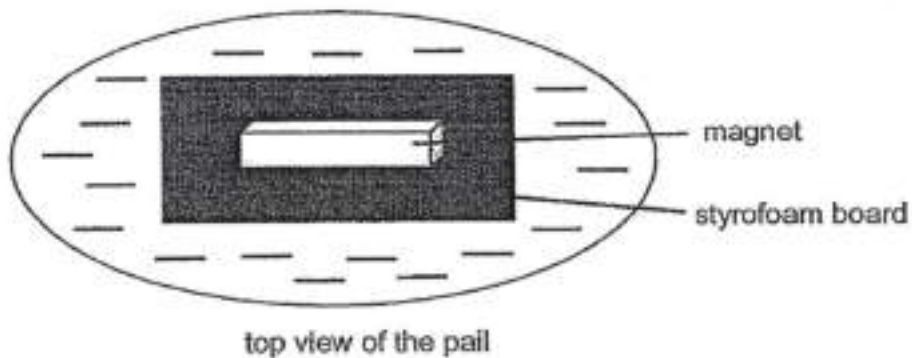
- A) Strong
- B) Flexible
- C) Magnetic

**Question 34 of 59**

Primary 4 Science (Term 4)

1 pt

Sarah then places the magnet onto a styrofoam board which she puts them in a pail of water. She spins the styrofoam board and it comes to a complete stop pointing in a certain direction.



In which direction will the magnet come to a rest?

[1]

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**Question 35 of 59**

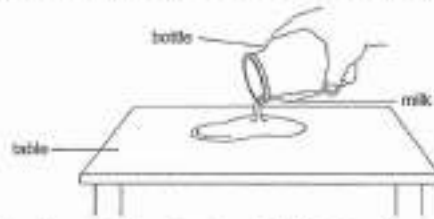
Primary 4 Science (Term 4)

2 pts

Choose the correct words from the list below to fill in the blanks below.

1. [ ]

Jennifer pours milk from a bottle onto a table as shown below.

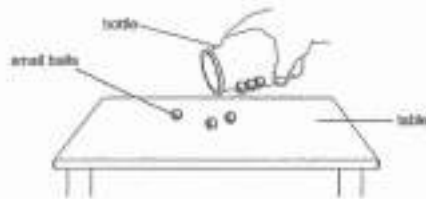


The volume of milk remains the same but its shape changes.  
This shows that milk is a

A. gas

2. [ ]

Jennifer pours some small balls from a bottle onto a table as shown below.



The shape and volume of the small balls remain the same.  
This shows that a marble is a \_\_\_\_\_.

B. liquid

C. solid

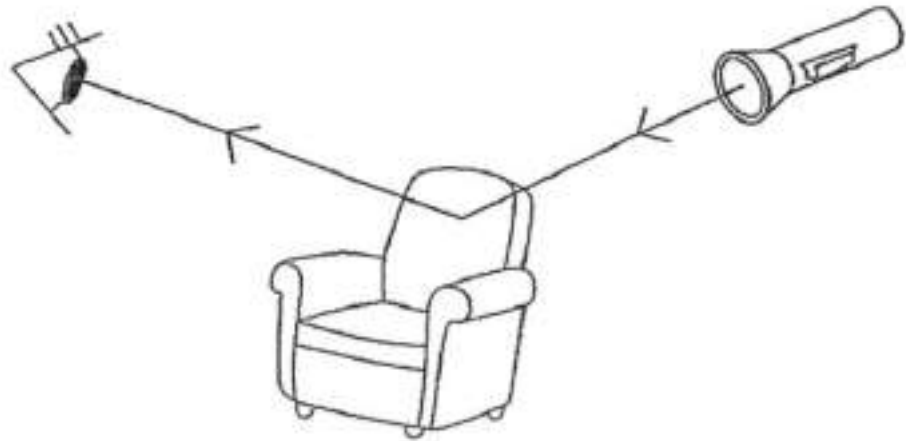


## Question 36 of 59

Primary 4 Science (Term 4)

2 pts

The diagram shows how Jamie sees a sofa in the living room.



Fill in the blanks below using the correct words in the list.

1. [ ] The torch is the light \_\_\_\_\_.

A. reflected

2. [ ] Light is \_\_\_\_\_ by the sofa into Jamie's eye.

B. house

C. source

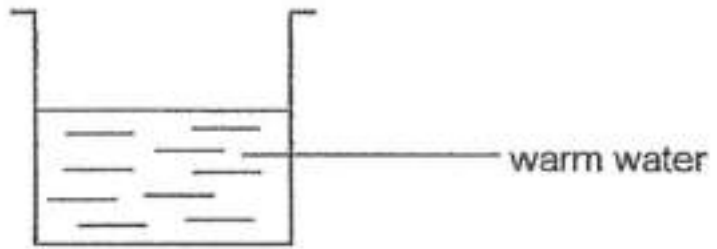
D. absorbed

**Question 37 of 59**

Primary 4 Science (Term 4)

2 pts

The diagram shows a beaker of warm water.



1. [ ] When heat in the water is lost to the surroundings, its temperature \_\_\_\_\_.

A. decreases

2. [ ] The beaker of warm water is placed over a heat source. After some time, the water will change its state to become a \_\_\_\_\_.

B. remained unchanged

C. gas

D. increases

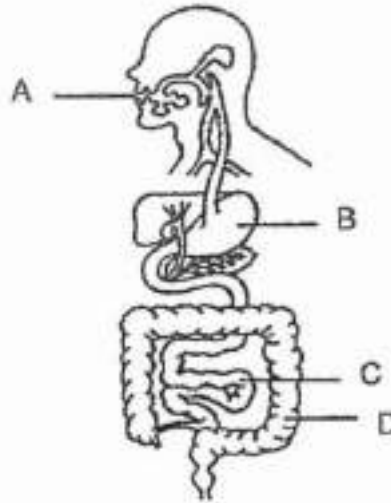
E. solid

**Question 38 of 59**

Primary 4 Science (Term 4)

0 pts

Tara drew a model of the human digestive system and labelled the organs, A, B, C and D, as shown below.



Name the organs, A, B, C and D of the digestive system. (2 marks)

*This question 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.*

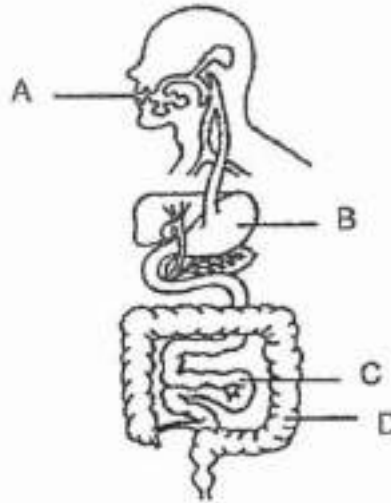
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**Question 39 of 59**

Primary 4 Science (Term 4)

0 pts

Tara drew a model of the human digestive system and labelled the organs, A, B, C and D, as shown below.



Explain how the chewing of food at Organ A helps in digestion. (2 marks)

This question 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.

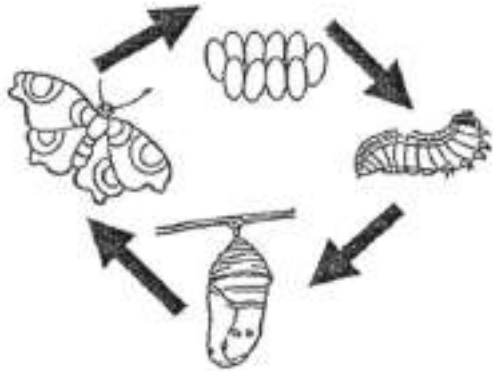
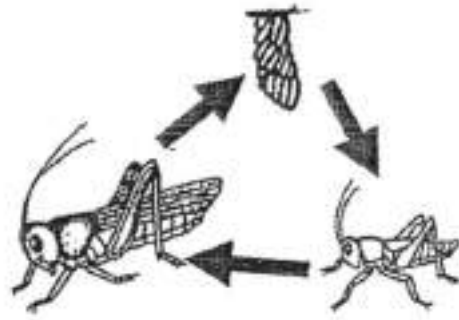
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**Question 40 of 59**

Primary 4 Science (Term 4)

0 pts

The diagrams below show the life cycle of the butterfly and the grasshopper.

**Life cycle of butterfly****Life cycle of grasshopper**

How do the two animals reproduce? (1 mark)

*This question 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.*

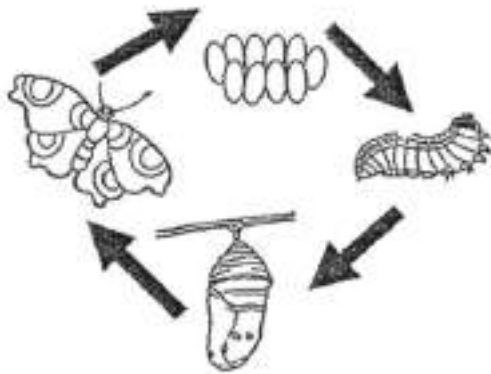
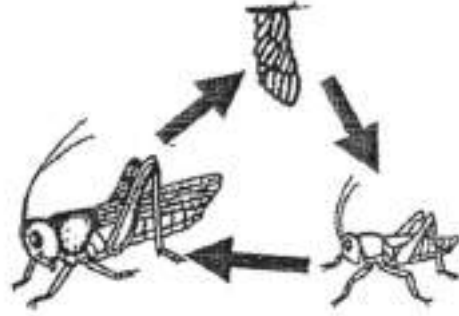
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**Question 41 of 59**

Primary 4 Science (Term 4)

0 pts

The diagrams below show the life cycle of the butterfly and the grasshopper.

**Life cycle of butterfly****Life cycle of grasshopper**

Based on the diagram above, state one difference between the life cycles of the butterfly and the grasshopper. (1 mark)

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

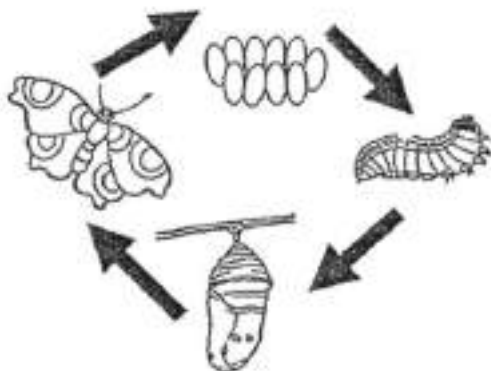
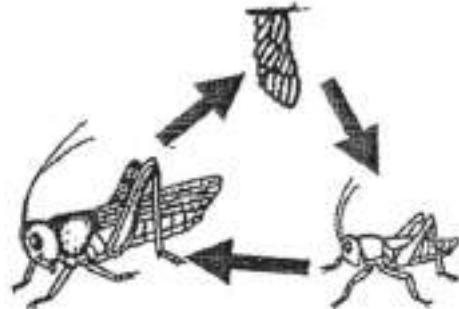
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

**Question 42 of 59**

Primary 4 Science (Term 4)

1 pt

The diagrams below show the life cycle of the butterfly and the grasshopper.

**Life cycle of butterfly****Life cycle of grasshopper**

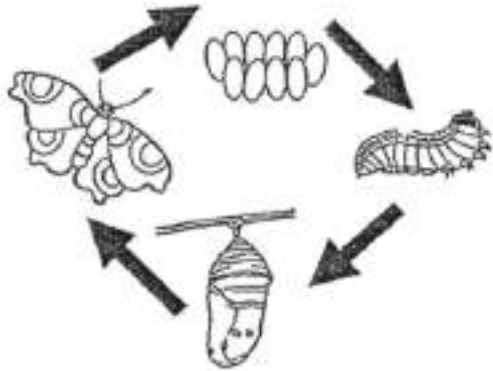
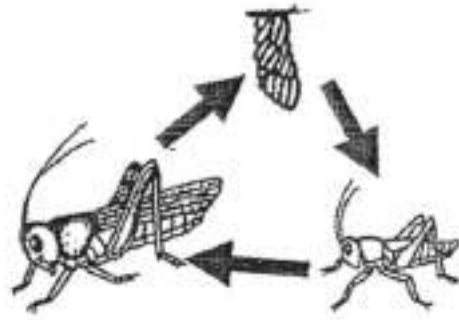
Name another animal that goes through a similar life cycle as the butterfly.

**Question 43 of 59**

Primary 4 Science (Term 4)

1 pt

The diagrams below show the life cycle of the butterfly and the grasshopper.

**Life cycle of butterfly****Life cycle of grasshopper**

Name another animal that goes through a similar life cycle as the grasshopper.

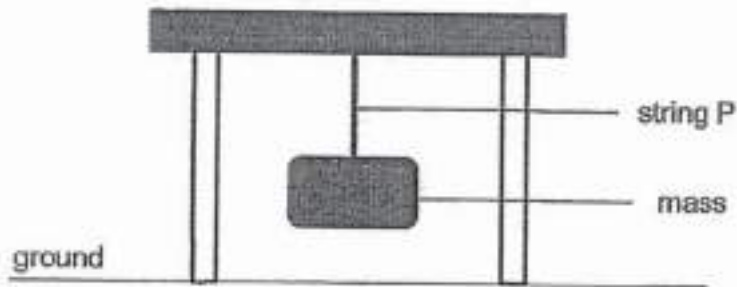
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## Question 44 of 59

Primary 4 Science (Term 4)

0 pts

Sam carried out an investigation to find out the strength of four different strings made of materials P, Q, R and S. He set up the experiment as shown in the diagram below.



He hung a mass of 50g and increased the mass on each string until it broke. He recorded his results as shown in the table below.

String made of material	Mass hung on each string before it broke (g)
P	200
Q	50
R	150
S	100

What is the relationship between the strength of the string and the mass hung on each string before it broke? (1 mark)

*This question 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.*

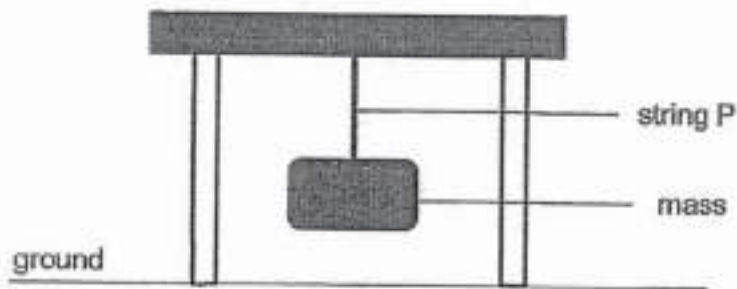


**Question 45 of 59**

Primary 4 Science (Term 4)

1 pt

Sam carried out an investigation to find out the strength of four different strings made of materials P, Q, R and S. He set up the experiment as shown in the diagram below.



He hung a mass of 50g and increased the mass on each string until it broke. He recorded his results as shown in the table below.

String made of material	Mass hung on each string before it broke (g)
P	200
Q	50
R	150
S	100

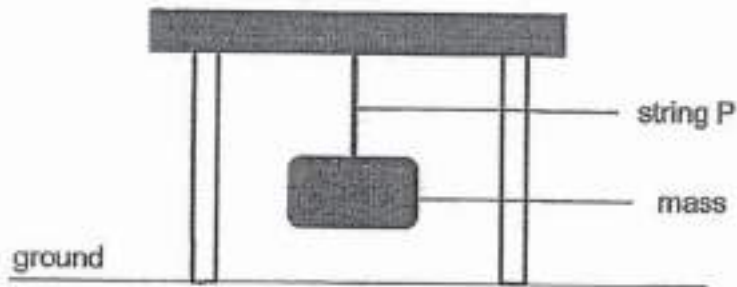
Based on Sam's results, arrange the materials, P, Q, R and S, in order of their strengths, starting with the weakest.

**Question 46 of 59**

Primary 4 Science (Term 4)

0 pts

Sam carried out an investigation to find out the strength of four different strings made of materials P, Q, R and S. He set up the experiment as shown in the diagram below.



He hung a mass of 50g and increased the mass on each string until it broke. He recorded his results as shown in the table below.

String made of material	Mass hung on each string before it broke (g)
P	200
Q	50
R	150
S	100

Sam claimed that Material Q is the most suitable to make into a bag that can hold items with a total mass 90g. Do you agree with him? Explain your answer. (2 marks)

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

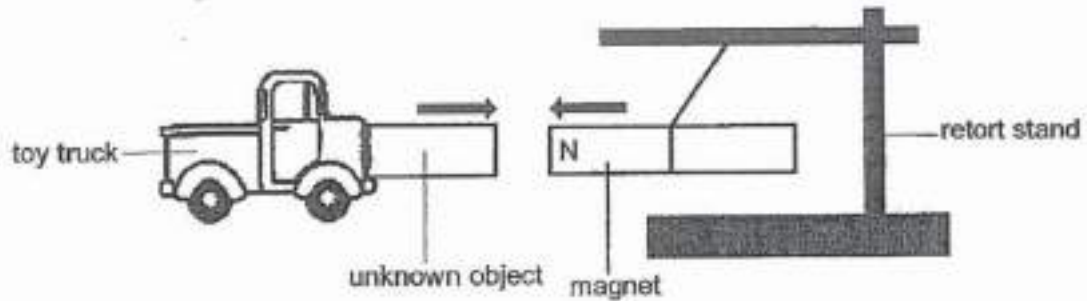
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

**Question 47 of 59**

Primary 4 Science (Term 4)

1 pt

A magnet was hung on a retort stand. Jeremy moved the toy truck with an unknown object towards the magnet. Both the suspended magnet and the toy truck moved towards each other. The direction of the movement is represented by the arrows shown in the diagram below.



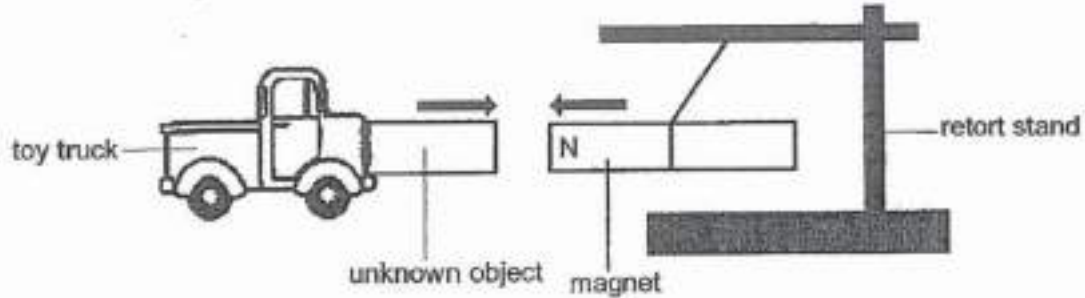
Based on the experiment, state one characteristic of the unknown material. (1 mark)

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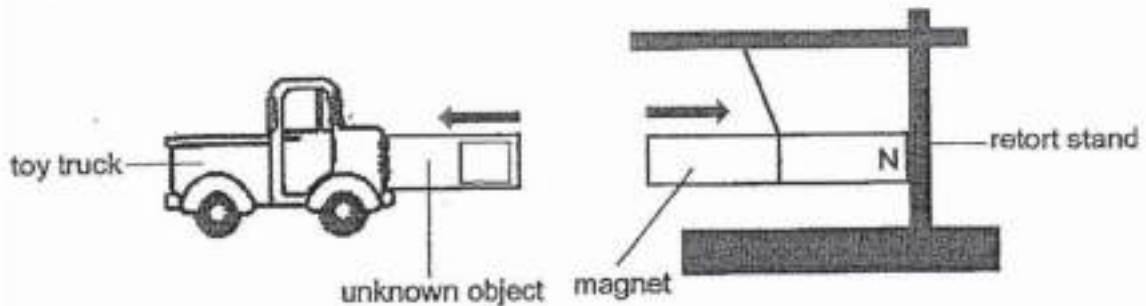
## Question 48 of 59

Primary 4 Science (Term 4) 0 pts

A magnet was hung on a retort stand. Jeremy moved the toy truck with an unknown object towards the magnet. Both the suspended magnet and the toy truck moved towards each other. The direction of the movement is represented by the arrows shown in the diagram below.



Jeremy then turned over the suspended magnet and repeated the experiment as above. He realised that the toy truck moved away this time.



Jeremy concluded that the unknown object is a magnet. Explain why this is so. (2 marks)

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

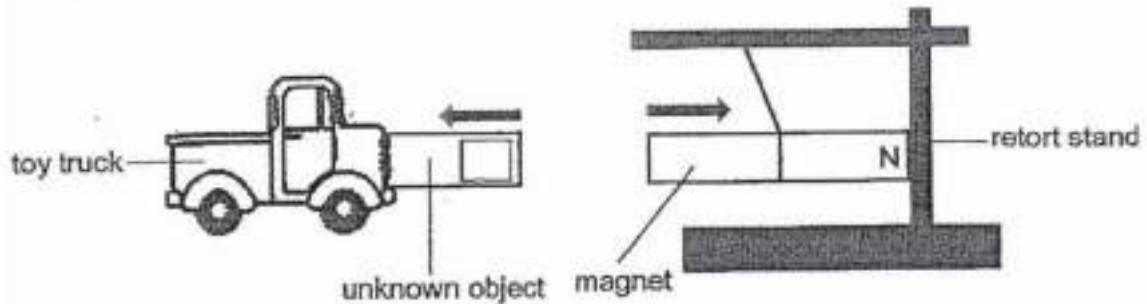
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

**Question 49 of 59**

Primary 4 Science (Term 4)

1 pt

Jeremy then turned over the suspended magnet and repeated the experiment as above. He realised that the toy truck moved away this time.



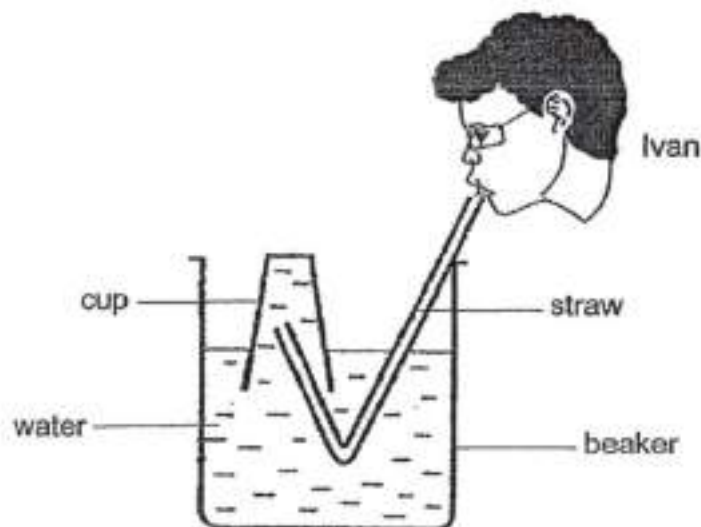
Label the pole of the unknown object in the box in the diagram above.

**Question 50 of 59**

Primary 4 Science (Term 4)

0 pts

Ivan carried out an experiment to investigate the properties of air. He filled a cup of water and inverted it into a beaker of water as shown below.



What will happen to the water level in the cup when air is blown into the cup through the straw? Explain your answer. (2 marks)

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

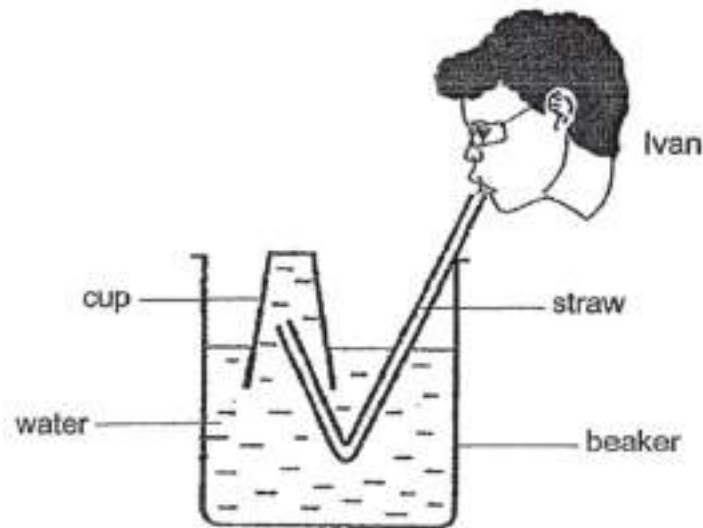
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 51 of 59

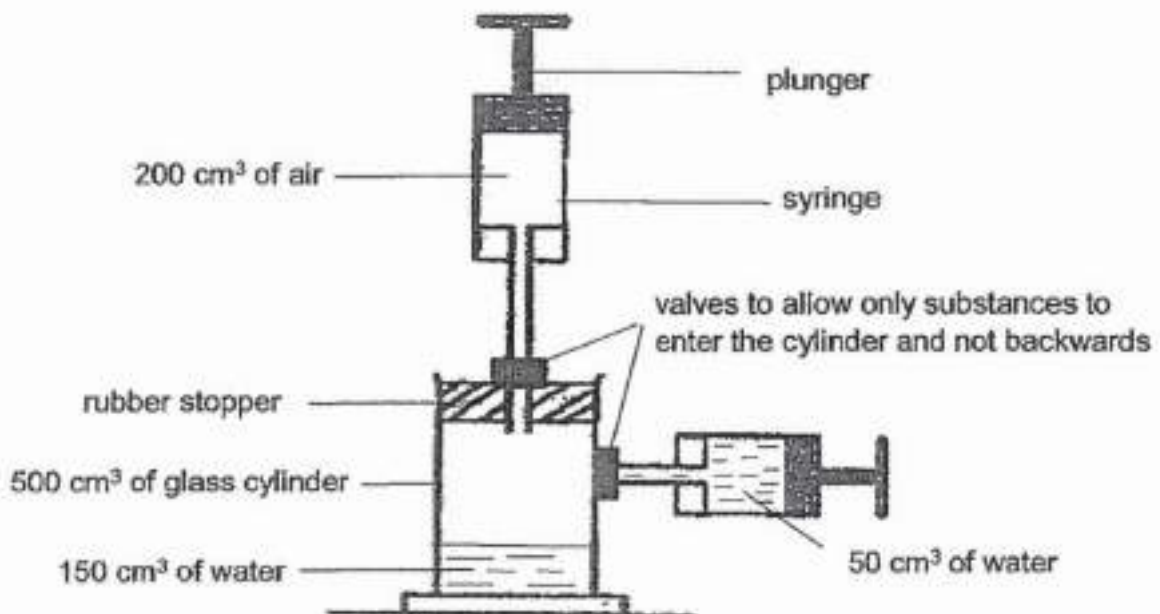
Primary 4 Science (Term 4)

0 pts

Ivan carried out an experiment to investigate the properties of air. He filled a cup of water and inverted it into a beaker of water as shown below.



Ivan then carried out another experiment. A  $500\text{ cm}^3$  glass cylinder, containing  $150\text{ cm}^3$  of water, was connected to two syringes. One syringe was filled with  $200\text{ cm}^3$  of air and the other one had  $50\text{ cm}^3$  of water as shown in the diagram below.



Both the air and water in the two syringes were emptied into the glass cylinder.

What is the final volume of air in the glass cylinder? Using the properties of matter, explain why. [2]

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

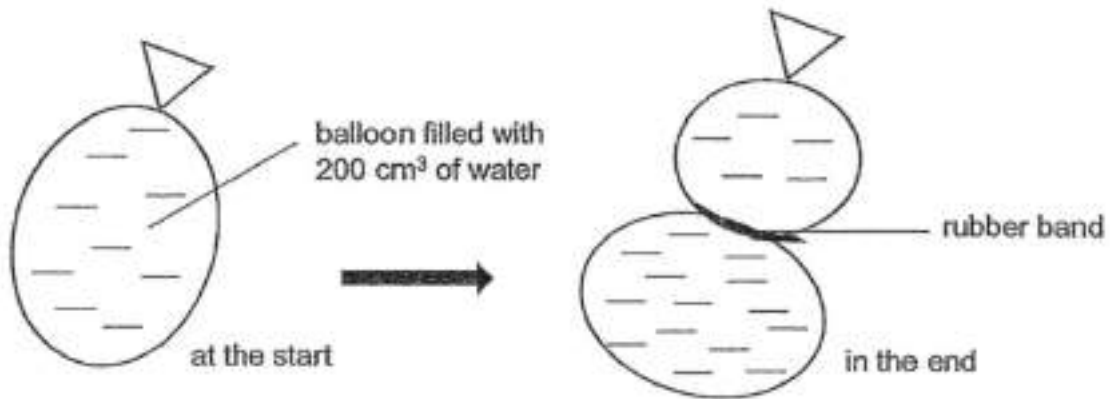
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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**Question 52 of 59**

Primary 4 Science (Term 4) 0 pts

Justina filled a balloon with  $200 \text{ cm}^3$  of water. She then tied a rubber band around the balloon as shown in the diagram below.



Did the volume of the water in the balloon change after it had been tied by the rubber band? Give a reason for your answer. (1 mark)

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

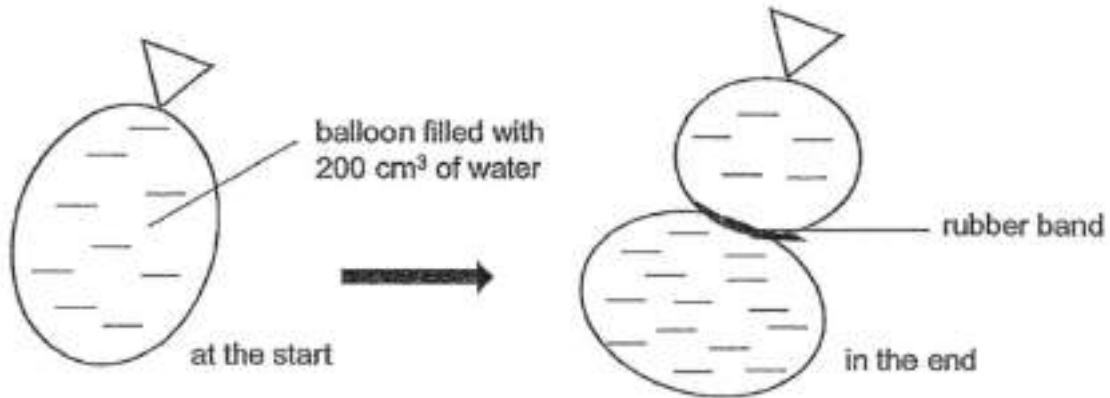
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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**Question 53 of 59**

Primary 4 Science (Term 4) 0 pts

Justina filled a balloon with  $200 \text{ cm}^3$  of water. She then tied a rubber band around the balloon as shown in the diagram below.



What does the change in the shape of the balloon in the above tells you about the property of water? (1 mark)

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

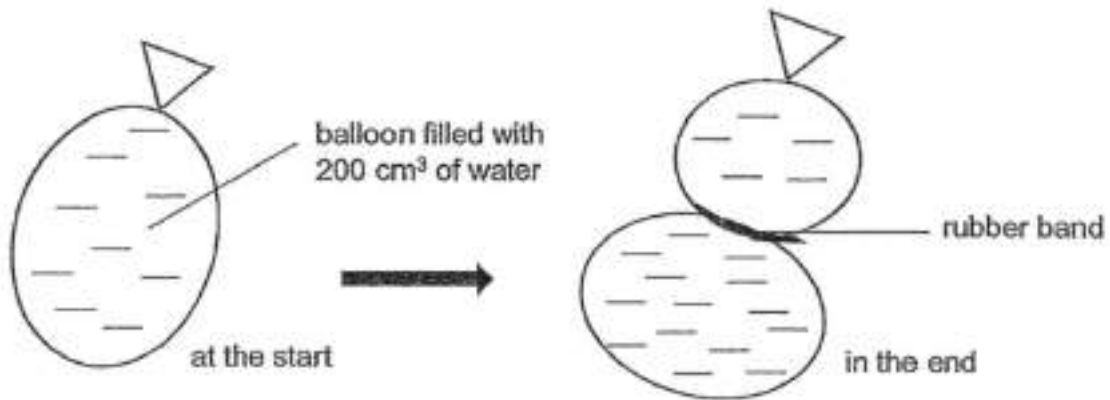
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*



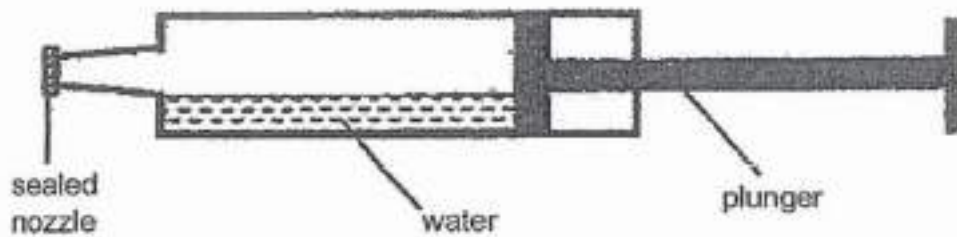
## Question 54 of 59

Primary 4 Science (Term 4) 0 pts

Justina filled a balloon with  $200 \text{ cm}^3$  of water. She then tied a rubber band around the balloon as shown in the diagram below.



Justina then conducted another experiment. She filled a syringe with some water as shown below. The nozzle of the syringe is tightly sealed.



She pushed the plunger and discovered that the plunger could be pushed in slightly.

Explain why the plunger could be pushed in slightly.

[2]

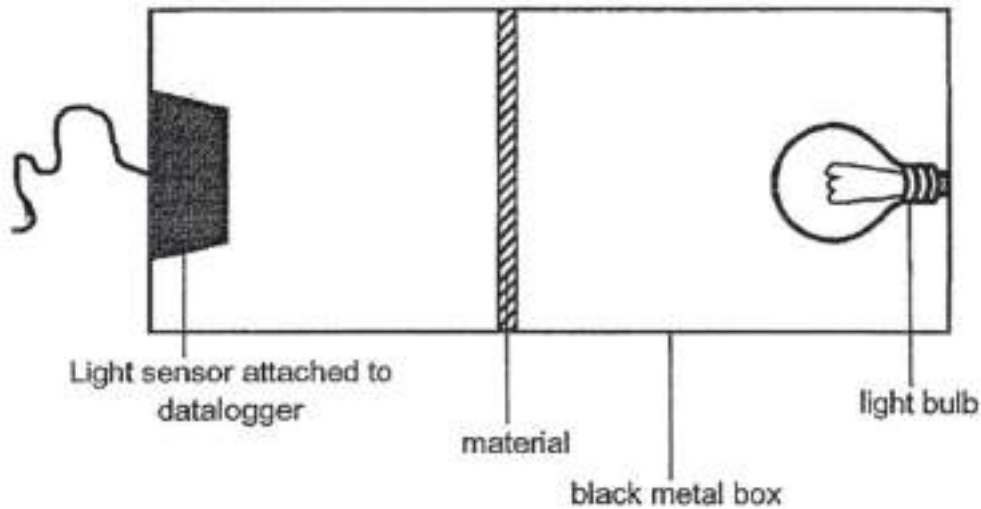
*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*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.*

## Question 55 of 59

Primary 4 Science (Term 4) 0 pts

Julie wanted to find out which material, P, Q, R or S, blocks out the most amount of light. She placed each material, one at a time, in a black metal box and measured the amount of light detected by the light sensor attached to the datalogger as shown in the diagram below.



Material	Amount of light detected (units)
P	200
Q	180
R	150
S	0

Julie's house is undergoing renovation and she would need to choose a material to make her toilet door.

Which material should she choose that would best make her toilet door? Explain your answer. (2 marks)

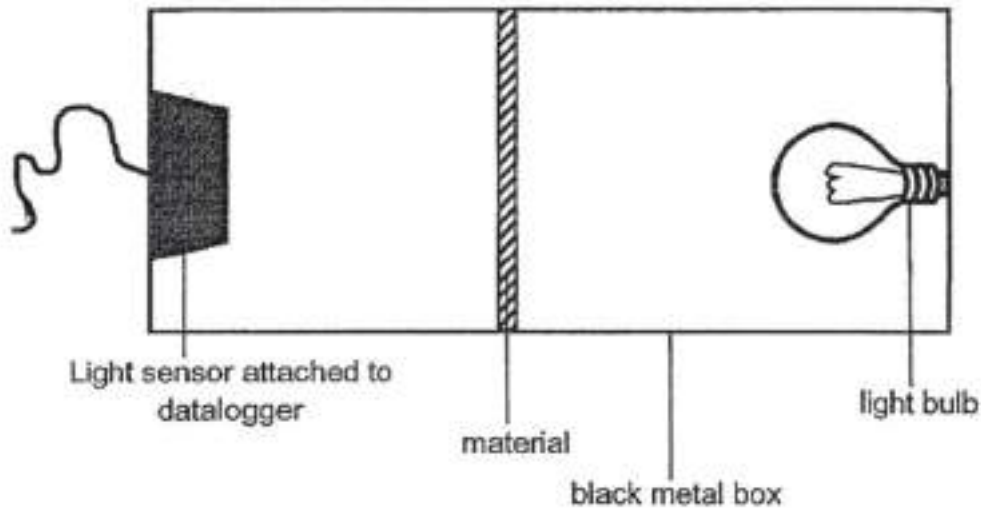
*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*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.*

## Question 56 of 59

Primary 4 Science (Term 4) 2 pts

Julie wanted to find out which material, P, Q, R or S, blocks out the most amount of light. She placed each material, one at a time, in a black metal box and measured the amount of light detected by the light sensor attached to the datalogger as shown in the diagram below.



Material	Amount of light detected (units)
P	200
Q	180
R	150
S	0

Choose the correct answer to identify the changed (independent) variable, measured (dependent) variable and the constant variables in her experiment. (2 marks)

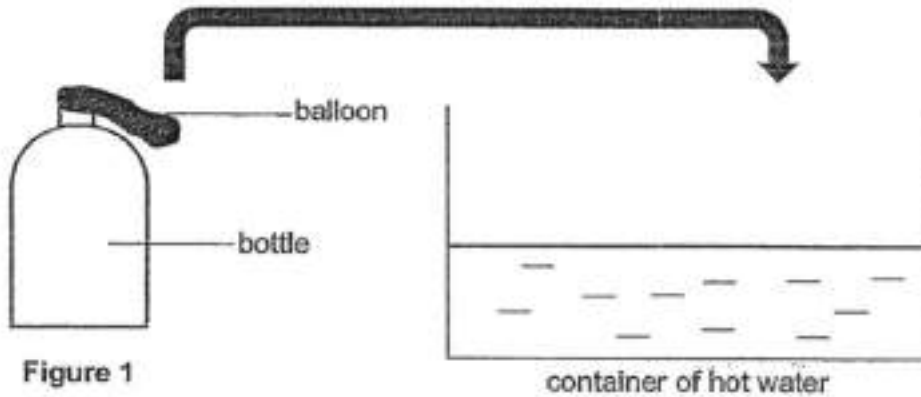
- 
1.  Type of materials used                      A. Constant Variable
- 
2.  The thickness of the materials used                      B. Variable that is changed
- 
3.  The amount of light detected by the light sensor                      C. Variable that is measured
- 
4.  The amount of light shining from the torch
-

**Question 57 of 59**

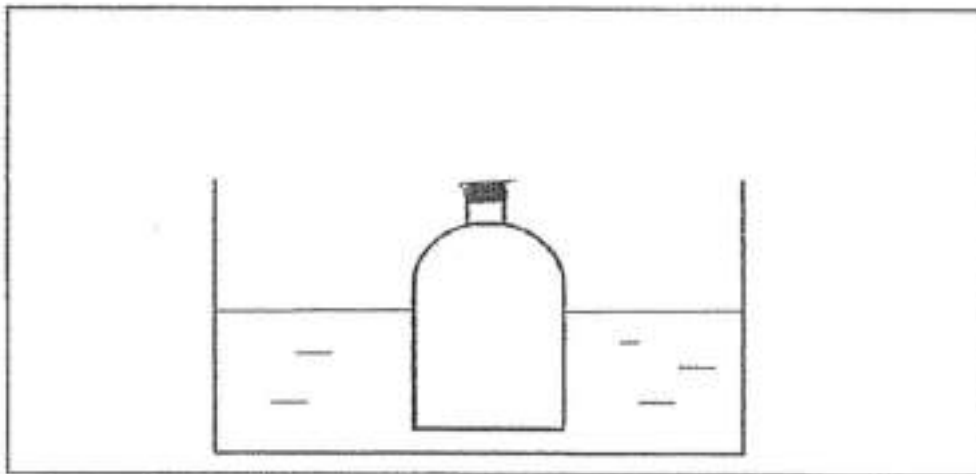
Primary 4 Science (Term 4)

0 pts

Jesslyn attached a balloon to a bottle as shown in Figure 1 below. She then placed the bottle in a container of hot water.



In the box provided below, draw what Jesslyn would observe of the balloon when the bottle is placed into the container containing hot water. [1]



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

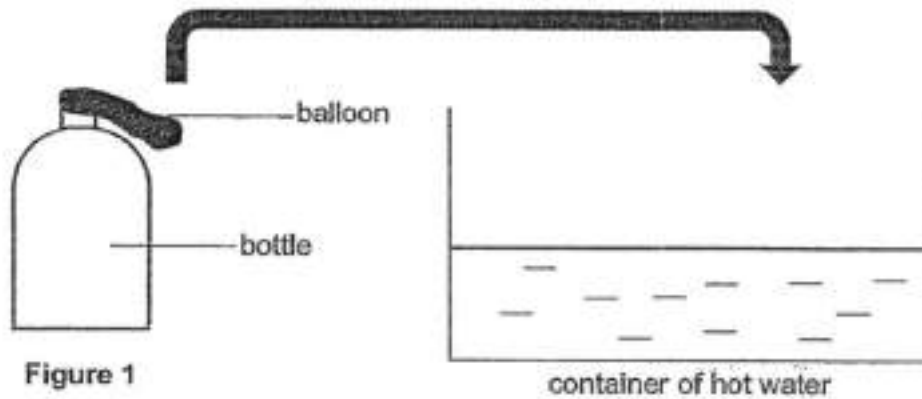
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 58 of 59

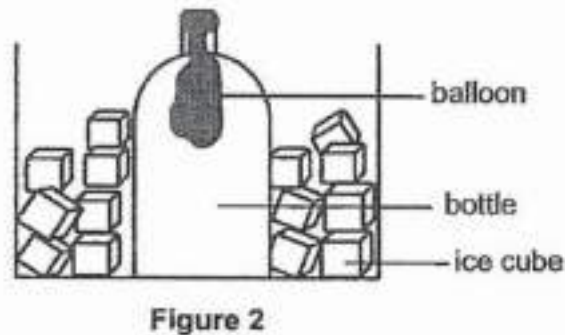
Primary 4 Science (Term 4)

0 pts

Jesslyn attached a balloon to a bottle as shown in Figure 1 below. She then placed the bottle in a container of hot water.



Jesslyn did another experiment and this time, she placed the bottle in a container filled with ice cubes. After a while, the balloon was drawn into the bottle as shown in Figure 2 below.



Why was the balloon drawn into the bottle?

[1]

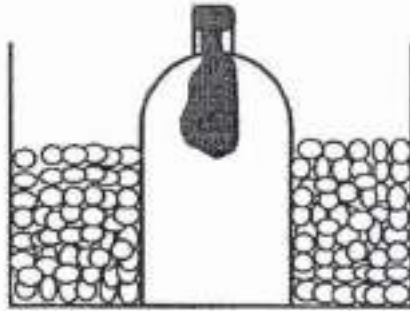
*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*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.*

**Question 59 of 59**

Primary 4 Science (Term 4) 0 pts

Jesslyn then carried out the experiment again. This time, she placed the bottle into a container of crushed ice as shown below.



Jesslyn observed that the balloon was drawn into the bottle more quickly.  
Explain why.

[2]

This question 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.

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