

**Test:** Primary 4 Science (Term 4) - ACS (2020)

**Points:** 77 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 63**

Primary 4 Science (Term 4) 2 pts

For each question, four options are given. Make your choice and choose the correct answer. (56 marks)

A snail hides itself in its shell when touched.



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

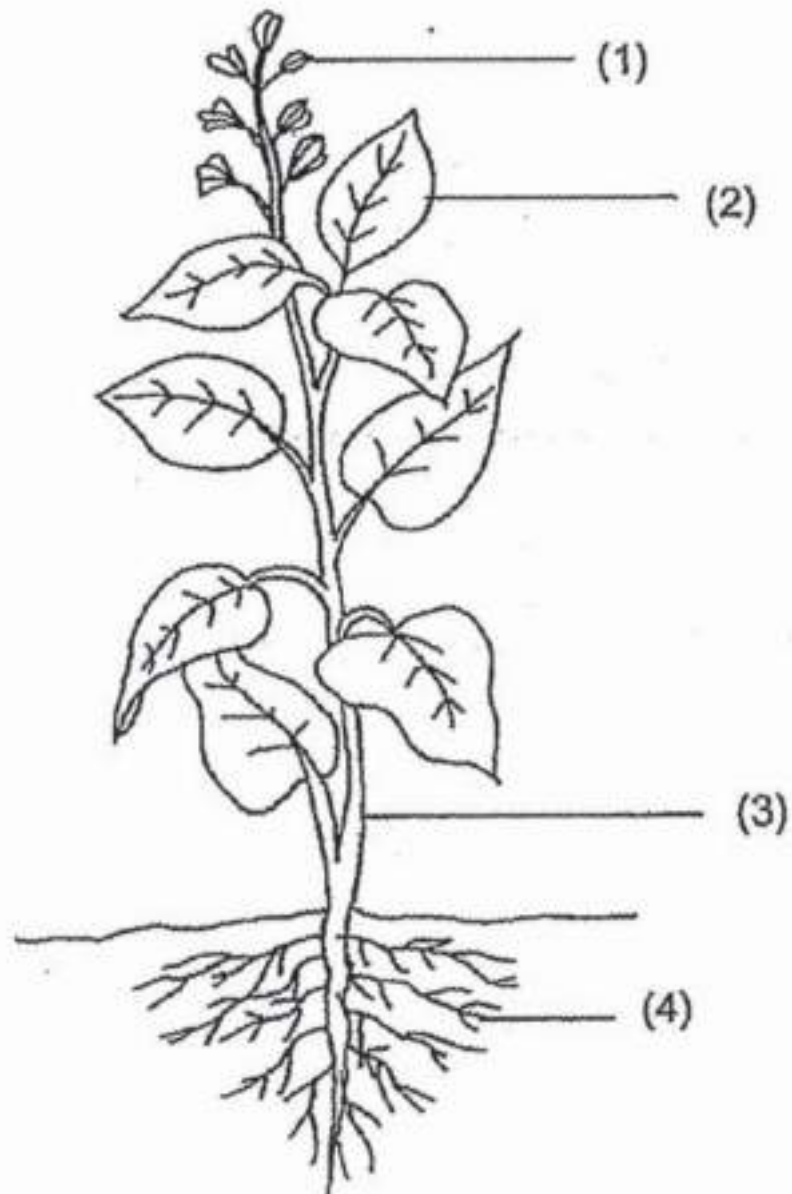
- A) breathes
- B) needs food
- C) can respond
- D) can reproduce

## Question 2 of 63

Primary 4 Science (Term 4)

2 pts

Which part, (1), (2), (3) or (4), holds the plant upright?



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

**Question 3 of 63**

Primary 4 Science (Term 4) 2 pts

The arrows (→) in the diagram show the direction of movement of a substance in plants.

roots → stem → leaves

What is this substance?

- A) water
- B) food
- C) soil
- D) air

**Question 4 of 63**

Primary 4 Science (Term 4) 2 pts

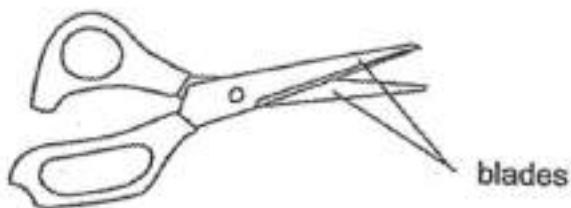
Which animal has a pupa as a stage in its life cycle?

- A) frog
- B) beetle
- C) chicken
- D) grasshopper

**Question 5 of 63**

Primary 4 Science (Term 4) 2 pts

The diagram shows a pair of scissors.



Metal is used to make the blades of the scissors because metal \_\_\_\_\_.

- A) is shiny
- B) can block light
- C) does not break easily
- D) can bend without breaking

**Question 6 of 63**

Primary 4 Science (Term 4)

2 pts

Which of the following substances has a fixed shape?

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- A)** air
- B)** milk
- C)** oil
- D)** rock

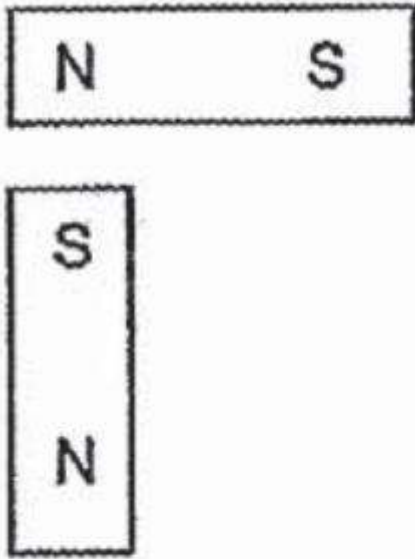
**Question 7 of 63**

Primary 4 Science (Term 4)

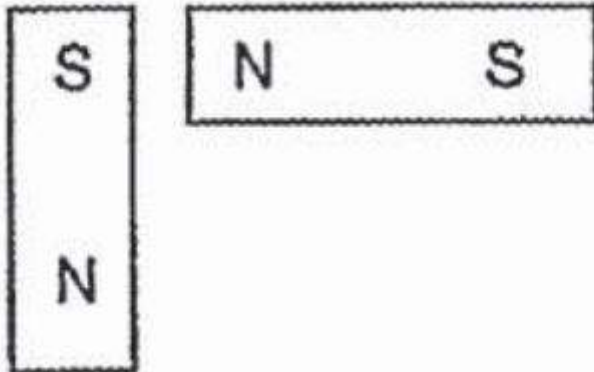
2 pts

In which of the following will the two magnets push each other away?

A)



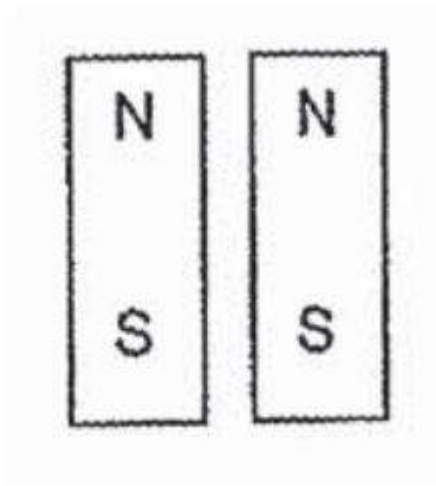
B)



C)



D)



**Question 8 of 63**

Primary 4 Science (Term 4)

2 pts

Which of the following is a source of light?

---

A)



the moon

B)



burning log

C)



a leaf

D)



a mirror

**Question 9 of 63**

Primary 4 Science (Term 4)

2 pts

Which of the following is NOT a source of heat?

- 
- A) The Sun
  - B) A lighted bulb
  - C) A candle flame
  - D) A woollen sweater



**Question 10 of 63**

Primary 4 Science (Term 4) 2 pts

Which one of the following is the best conductor of heat?

- A) A metal plate
- B) A paper plate
- C) A plastic plate
- D) A wooden plate

**Question 11 of 63**

Primary 4 Science (Term 4) 2 pts

Jane made the following statements on the young of animal P.

Young of animal P:

- breathes using gills
- does not look like the adult

Based on the observations, animal P is most likely to be a \_\_\_\_\_.

- A) frog
- B) whale
- C) beetle
- D) butterfly

**Question 12 of 63**

Primary 4 Science (Term 4) 2 pts

Al Mei recorded some information about the life cycle of a butterfly and a chicken.

		Butterfly	Chicken
A	Lays eggs in water	No	No
B	Has 4 stages in its life cycle	Yes	Yes
C	The young resembles the adult	No	Yes

Which of the following options shows the correct information about the two life cycles?

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

**Question 13 of 63**

Primary 4 Science (Term 4) 2 pts

Richard noticed that the number of caterpillars in his garden decreased after two weeks. He wrote down some reasons for this observation.

- A The caterpillars have died.
- B The caterpillars have laid eggs.
- C The caterpillars have turned into pupae.
- D The caterpillars have been eaten by other animals.

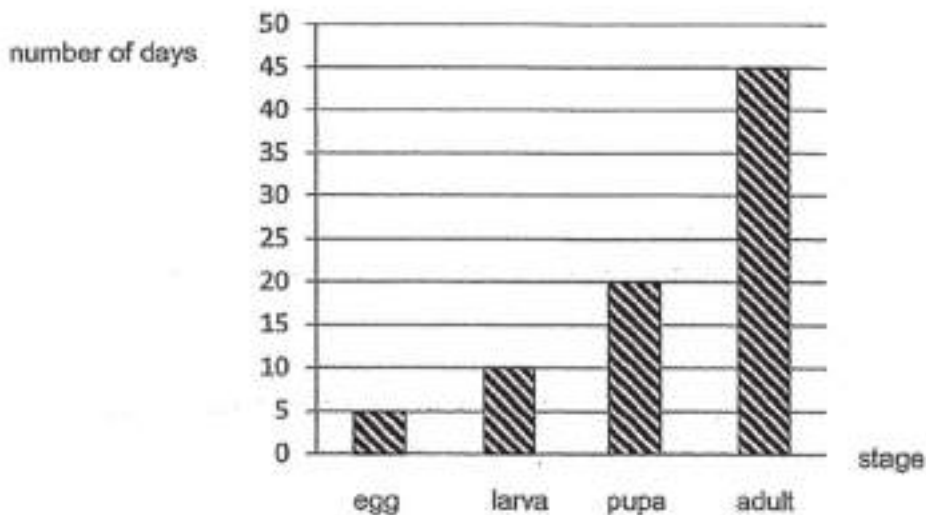
Which of the following are possible reasons to explain why the number of caterpillars decreased?

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

**Question 14 of 63**

Primary 4 Science (Term 4) 2 pts

The bar graph shows the stages and the number of days that animal Z remains at each stage of its life cycle.



How many days does it take for animal Z to become an adult after hatching from its egg?

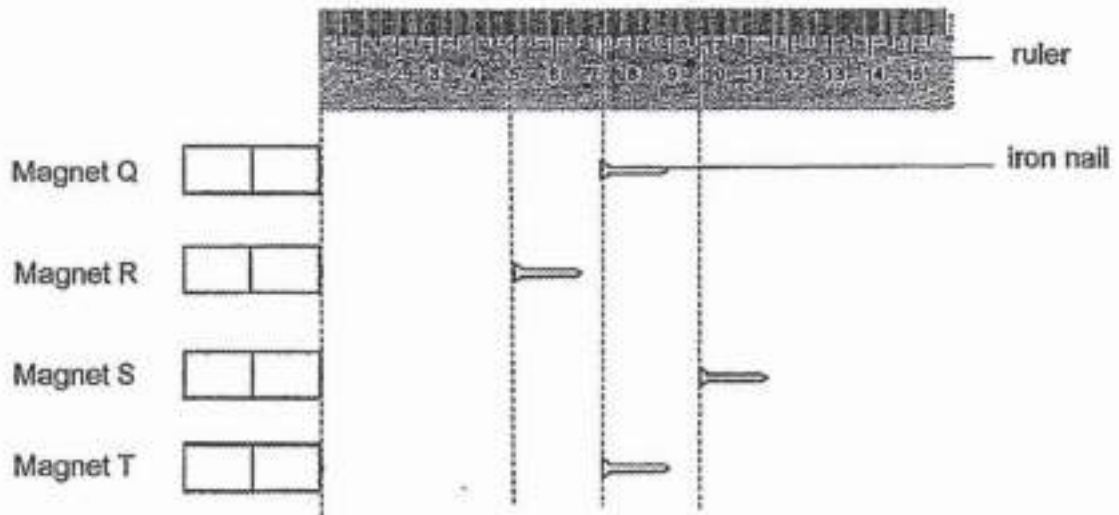
- A) 10
- B) 30
- C) 35
- D) 75

## Question 15 of 63

Primary 4 Science (Term 4)

2 pts

John wanted to find out the magnetic strength of four different magnets Q, R, S and T. He moved an iron nail slowly towards magnet Q and measured the distance when the nail was just attracted by the magnet. He repeated this experiment with magnets R, S and T. The results are shown in the diagram.



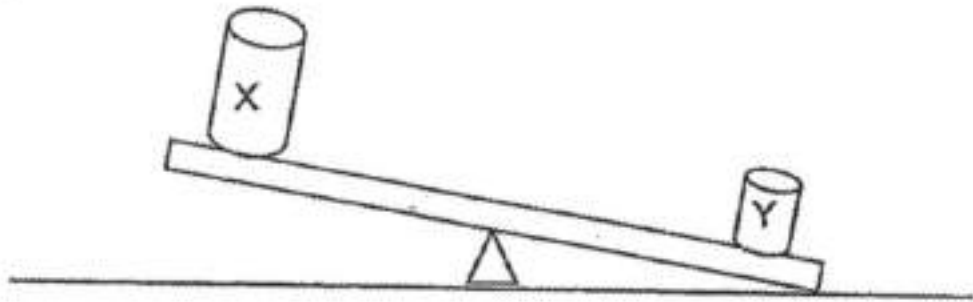
Based on the above results, the magnetic strength of \_\_\_\_\_.

- A) Magnet S is the greatest.
- B) Magnets Q and R is the same.
- C) Magnet Q is lesser than Magnet R.
- D) Magnet T is greater than Magnet S.

## Question 16 of 63

Primary 4 Science (Term 4) 2 pts

Two objects X and Y are placed on a balance as shown.



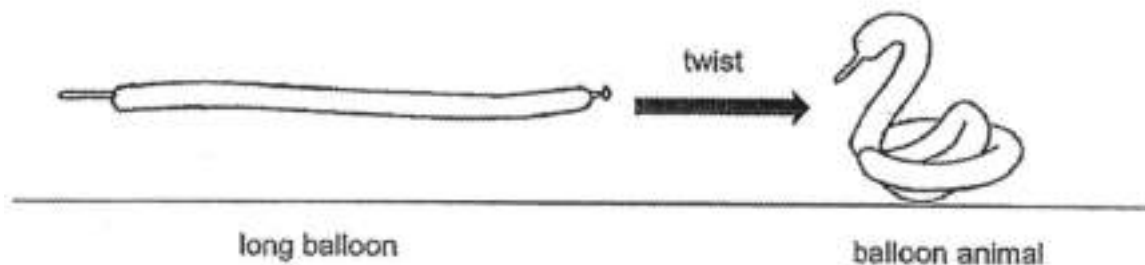
Based on the diagram, which of the following statements is correct?

- A) Object Y has less mass than object X.
- B) Object Y has more mass than object X.
- C) Object Y has a bigger volume than object X.
- D) Objects X and Y are made of the same material.

## Question 17 of 63

Primary 4 Science (Term 4) 2 pts

George fills up a long balloon with air and twists it to form a 'balloon animal' as shown.



Which of the following statements best explains why he is able to twist the long balloon into a 'balloon animal'?

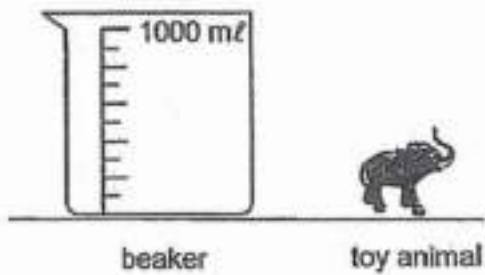
- A) Air has mass.
- B) Air occupies space.
- C) Air does not have a definite shape.
- D) Air does not have a definite volume.

**Question 18 of 63**

Primary 4 Science (Term 4)

2 pts

Leela wanted to find the volume of her toy animal using the beaker shown.



The following are the steps that she took to find the volume of the toy animal.

- A Read the new volume of water.
- B Fill the beaker with 500 ml of water.
- C Lower the toy animal gently into the beaker.
- D Calculate the difference between the old and new volume.

Which of the following shows the correct sequence of steps she took to find out the volume of the toy animal?

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

## Question 19 of 63

Primary 4 Science (Term 4)

2 pts

All recorded the properties of P, Q and R as shown.

	Does it have mass and volume?	Does it have a definite shape?	Does it have a definite volume?	Can it be compressed?
<b>P</b>	No	No	No	No
<b>Q</b>	Yes	Yes	Yes	No
<b>R</b>	Yes	No	No	Yes

Based on the table above, which of the following correctly identifies P, Q and R?

- A) 

<b>P</b>	<b>Q</b>	<b>R</b>
Balloon	Pen	Sponge
- B) 

<b>P</b>	<b>Q</b>	<b>R</b>
Light	Pen	Air
- C) 

<b>P</b>	<b>Q</b>	<b>R</b>
Air	Milk	Pen
- D) 

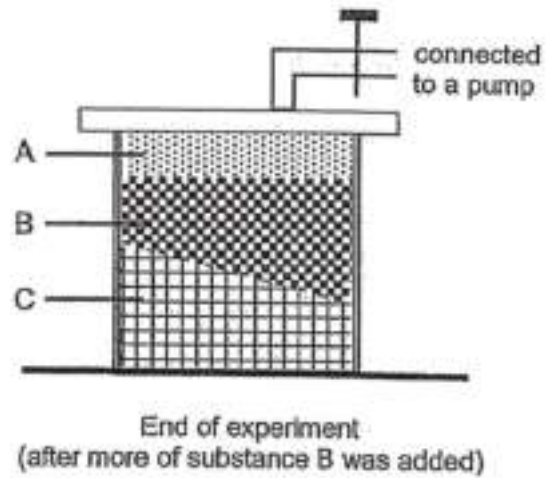
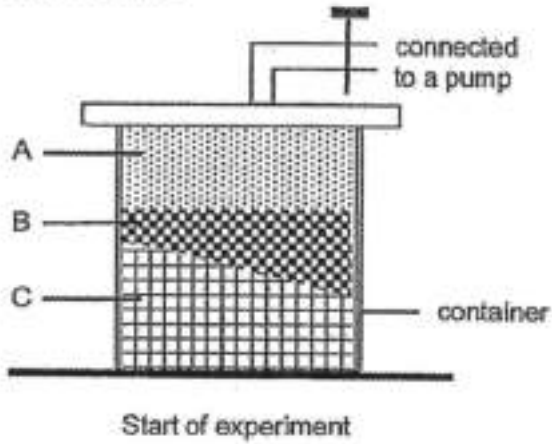
<b>P</b>	<b>Q</b>	<b>R</b>
Heat	Pen	Milk

## Question 20 of 63

Primary 4 Science (Term 4)

2 pts

At the start of her experiment, Jane had a container that contains three substances A, B and C as shown. Then, she added more of substance B into the container using the one-way pump. The final levels of substances A, B and C at the end of the experiment are shown in the diagrams.



Based on the diagrams above, which of the following correctly identifies the state of substances A, B and C?

- A) 

A	B	C
Gas	Liquid	Solid
- B) 

A	B	C
Liquid	Solid	Gas
- C) 

A	B	C
Liquid	Gas	Solid
- D) 

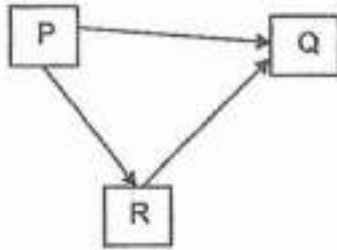
A	B	C
Gas	Solid	Liquid

## Question 21 of 63

Primary 4 Science (Term 4)

2 pts

James is able to see an object in a brightly-lit room. The arrows ( $\rightarrow$ ) in the diagram show the paths of light.



Which of the following identifies P, Q and R correctly?

- A) 

P	Q	R
light source	James' eyes	object
- B) 

P	Q	R
James' eyes	light source	object
- C) 

P	Q	R
light source	object	James' eyes
- D) 

P	Q	R
object	James' eyes	light source

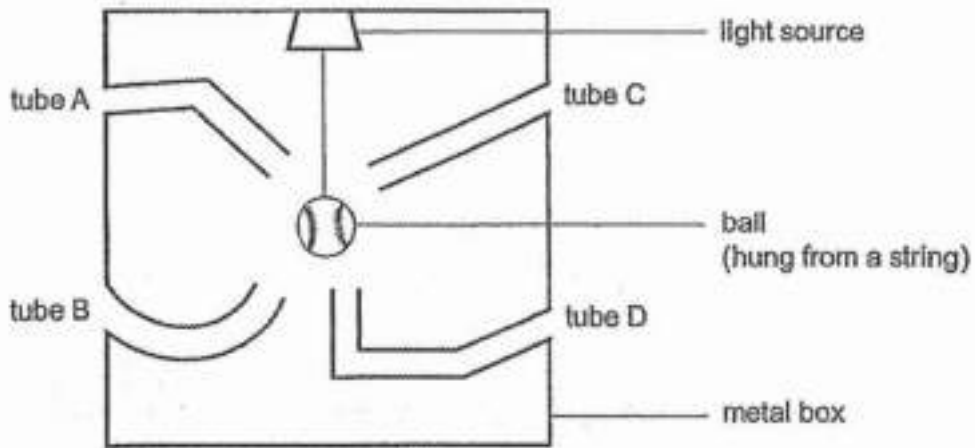


## Question 22 of 63

Primary 4 Science (Term 4)

2 pts

Edison placed a ball in the middle of a metal box with four hollow tubes and a light source as shown in the diagram.



Based on the diagram above, through which tube can he see the ball?

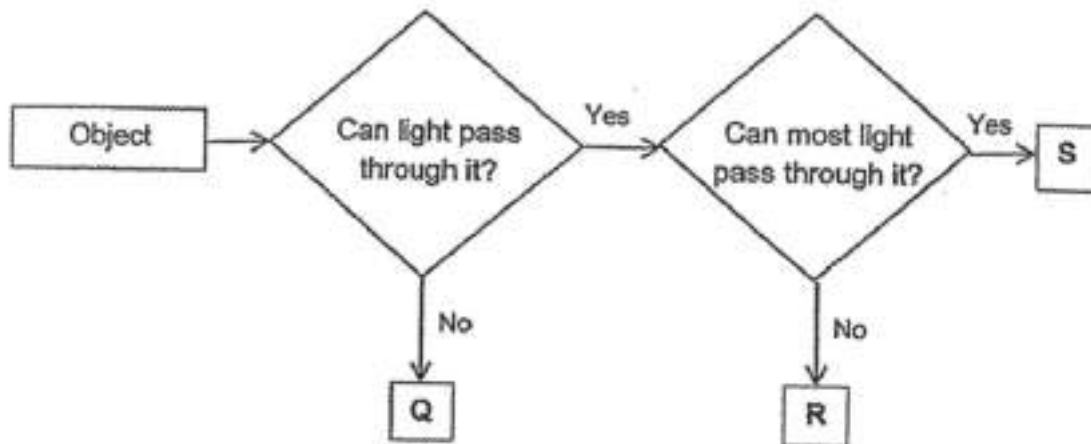
- A) A
- B) B
- C) C
- D) D

## Question 23 of 63

Primary 4 Science (Term 4)

2 pts

Study the flow chart carefully.



Based on the flow chart above, which of the following best represents objects Q, R and S?

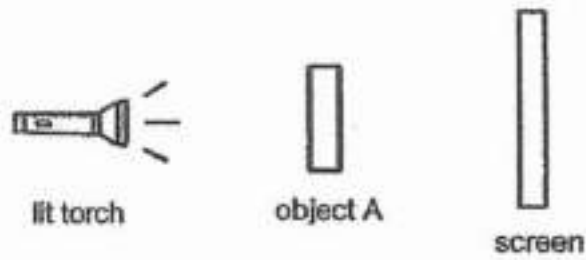
- A)
- |               |                 |                     |
|---------------|-----------------|---------------------|
| Q             | R               | S                   |
| frosted glass | thick cardboard | clear plastic sheet |
- B)
- |                 |               |                     |
|-----------------|---------------|---------------------|
| Q               | R             | S                   |
| thick cardboard | frosted glass | clear plastic sheet |
- C)
- |                 |                     |               |
|-----------------|---------------------|---------------|
| Q               | R                   | S             |
| thick cardboard | clear plastic sheet | frosted glass |
- D)
- |                     |               |                 |
|---------------------|---------------|-----------------|
| Q                   | R             | S               |
| clear plastic sheet | frosted glass | thick cardboard |

## Question 24 of 63

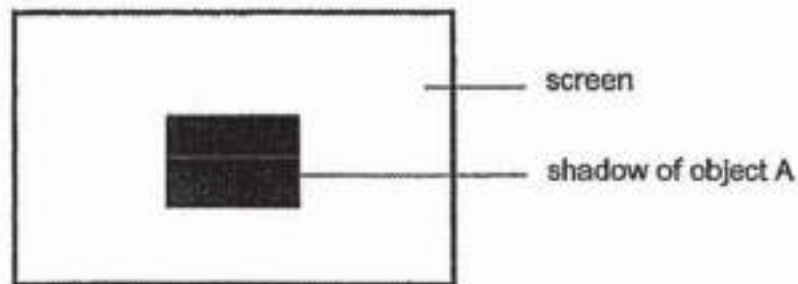
Primary 4 Science (Term 4)

2 pts

Colin carried out an experiment in a dark room using the set-up as shown.



When he switched on the torch, he saw the shadow of object A on the screen as shown in the diagram below.



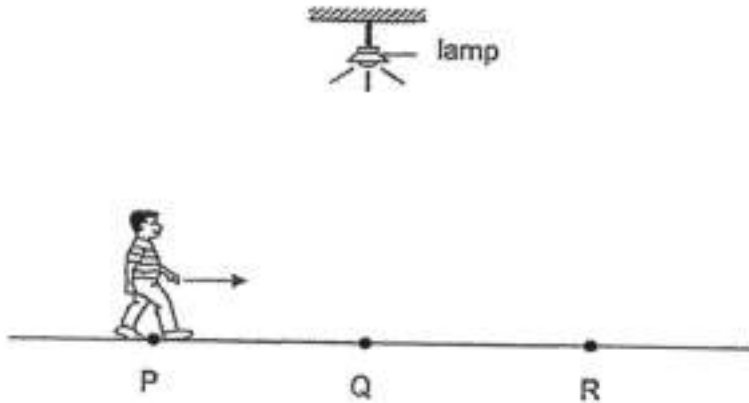
Based only on the observation above, which of the following statements is true?

- A) Object A did not allow light to pass through.
- B) Object A allowed most light to pass through.
- C) The shadow changed shape when the screen was moved nearer to object A.
- D) The shadow changed shape when the screen was moved further from object A.

## Question 25 of 63

Primary 4 Science (Term 4) 2 pts

Edmund walked in a straight line from P to R as shown in the diagram. At Q, he was directly under the lamp. The distance between P and Q is the same as the distance between Q and R.



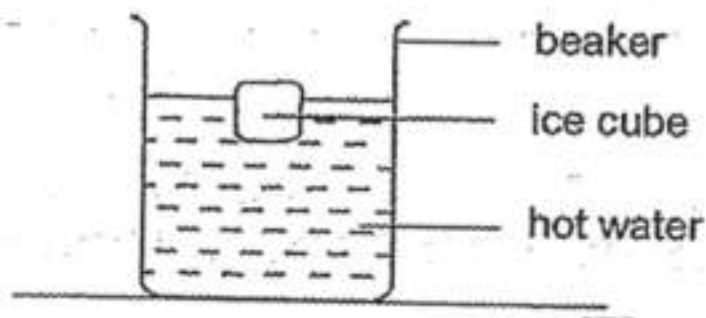
Based on the diagram above, which of the following statements is correct about the length of Edmund's shadow?

- A) His shadow was the longest when he was at Q.
- B) His shadow was the shortest when he was at Q.
- C) As he walked from P to Q, his shadow became longer.
- D) As he walked from Q to R, his shadow became shorter.

## Question 26 of 63

Primary 4 Science (Term 4) 2 pts

Andrew placed an ice cube into a beaker filled with hot water.



Which of the following statements is correct?

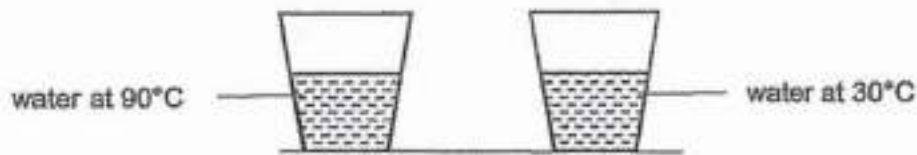
- A) The ice cube lost heat to the water.
- B) The water lost heat to the ice cube.
- C) The ice cube did not gain or lose heat.
- D) The water gained heat from the beaker.

**Question 27 of 63**

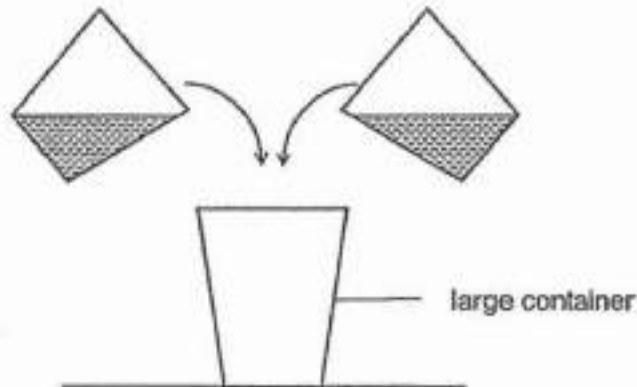
Primary 4 Science (Term 4)

2 pts

Bala filled up two glasses with the same amount of water. The temperatures of water at the start of the experiment are as shown.



Bala then mixed all the water from both glasses into a large container. He immediately measured the temperature of water in the large container.



Based on the information given above, the temperature of water in the large container that was immediately measured by Bala was \_\_\_\_\_.

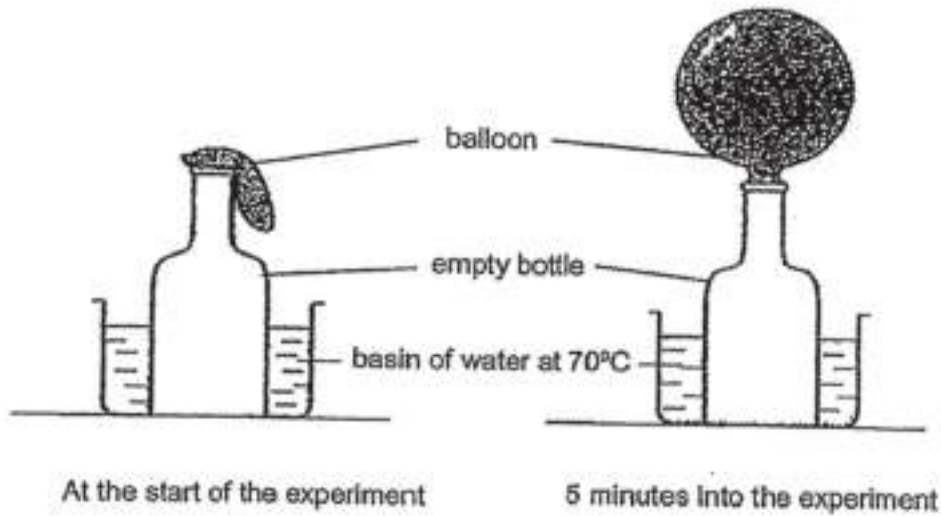
- A) 90°C
- B) higher than 90°C
- C) between 0°C to 30°C
- D) between 30°C to 90°C

## Question 28 of 63

Primary 4 Science (Term 4)

2 pts

Danny attached a balloon to an empty bottle. He then immersed the bottle in a basin of water at 70°C as shown.



After a while, the balloon was observed to have changed its shape.

Which of the following statements best explains this observation?

- 
- A) The balloon gained heat and expanded.
  - B) The empty bottle gained heat and expanded.
  - C) The air in the bottle gained heat and expanded.
  - D) The air in the balloon contracted and took up less space.

**Question 29 of 63**

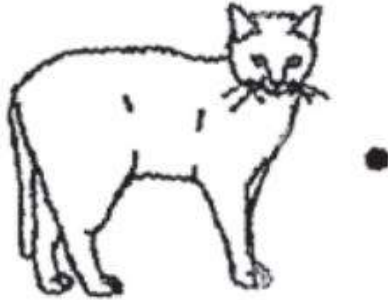
Primary 4 Science (Term 4)

3 pts

Match the following animals to the correct groups.

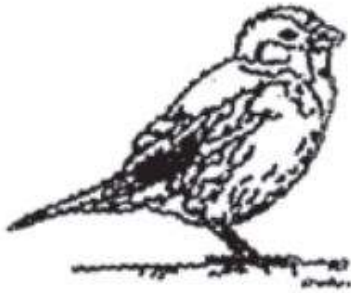
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1. [ ]



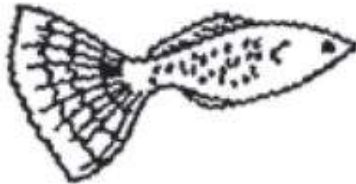
A. Mammal

2. [ ]



B. Fish

3. [ ]



C. Amphibian

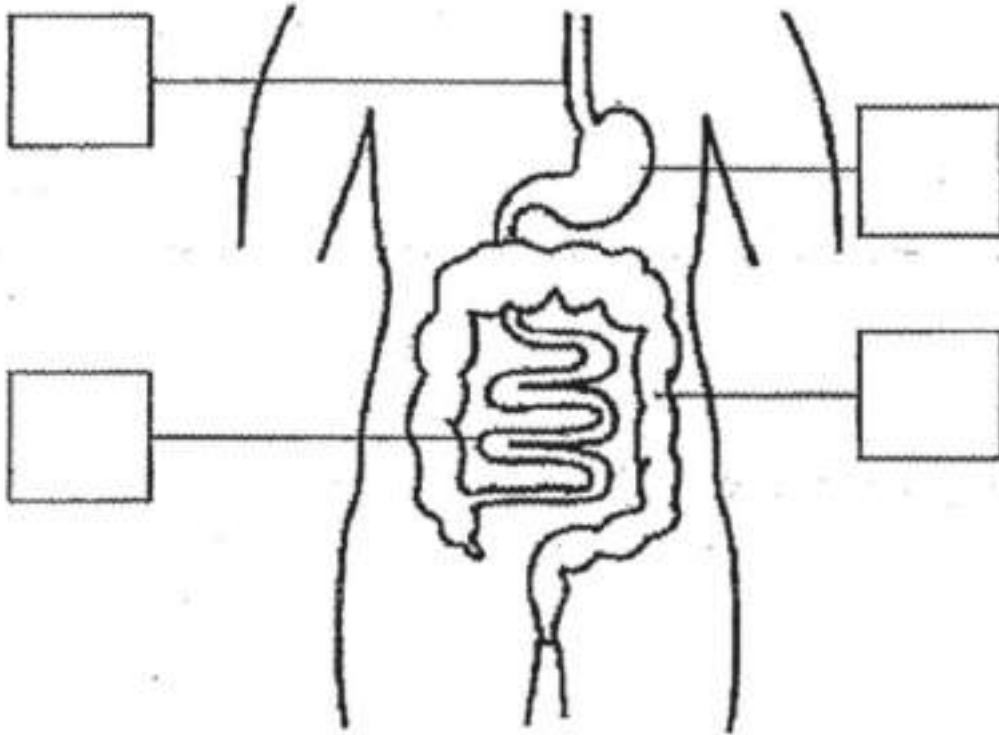
D. Bird

## Question 30 of 63

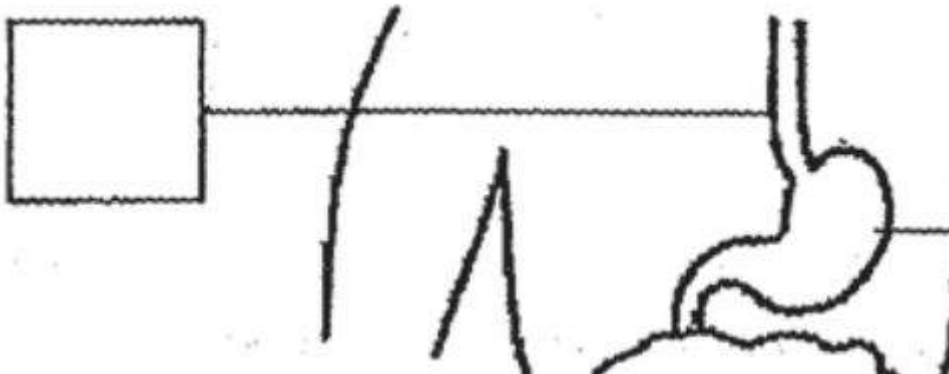
Primary 4 Science (Term 4)

1 pt

The diagram shows part of the human digestive system. Tick one box to show where the gullet is.



A)

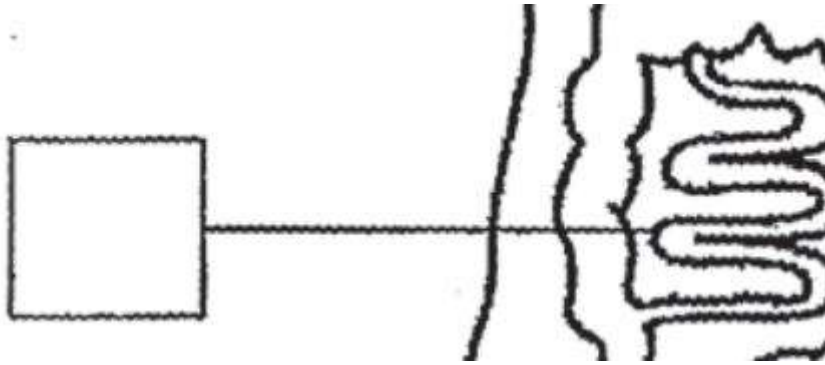


B)

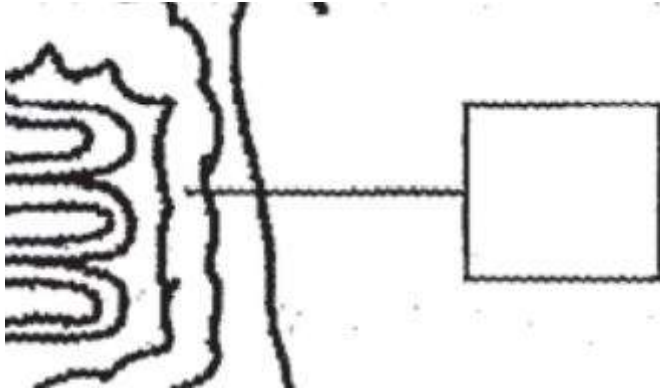


C)





D)

**Question 31 of 63**

Primary 4 Science (Term 4)

1 pt

Fill in the blank using the following helping words below.

1. [ ] Food from the gullet is next passed on to the \_\_\_\_\_.

A. Mouth

B. Stomach

C. Small intestine

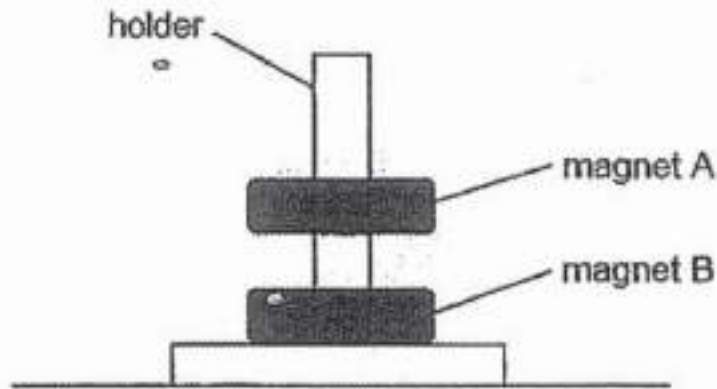
D. Large intestine

**Question 32 of 63**

Primary 4 Science (Term 4)

1 pt

Andy placed two ring magnets, A and B, through a holder as shown below.



The holder was made of plastic and did not attract the magnets.

Plastic is a \_\_\_\_\_ material.

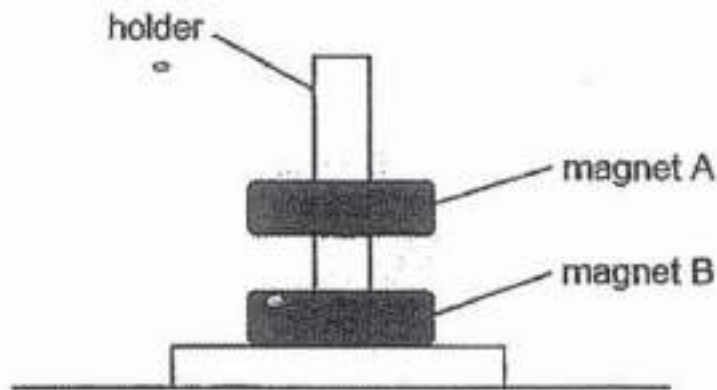
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**Question 33 of 63**

Primary 4 Science (Term 4)

1 pt

Andy placed two ring magnets, A and B, through a holder as shown below.



Why was magnet A floating above magnet B?

Magnet B was \_\_\_\_\_ magnet A.

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**Question 34 of 63**

Primary 4 Science (Term 4)

3 pts

Classify the following into matter and non-matter.

1. [ ] Honey

A. Matter

2. [ ] Shadow

B. Non-matter

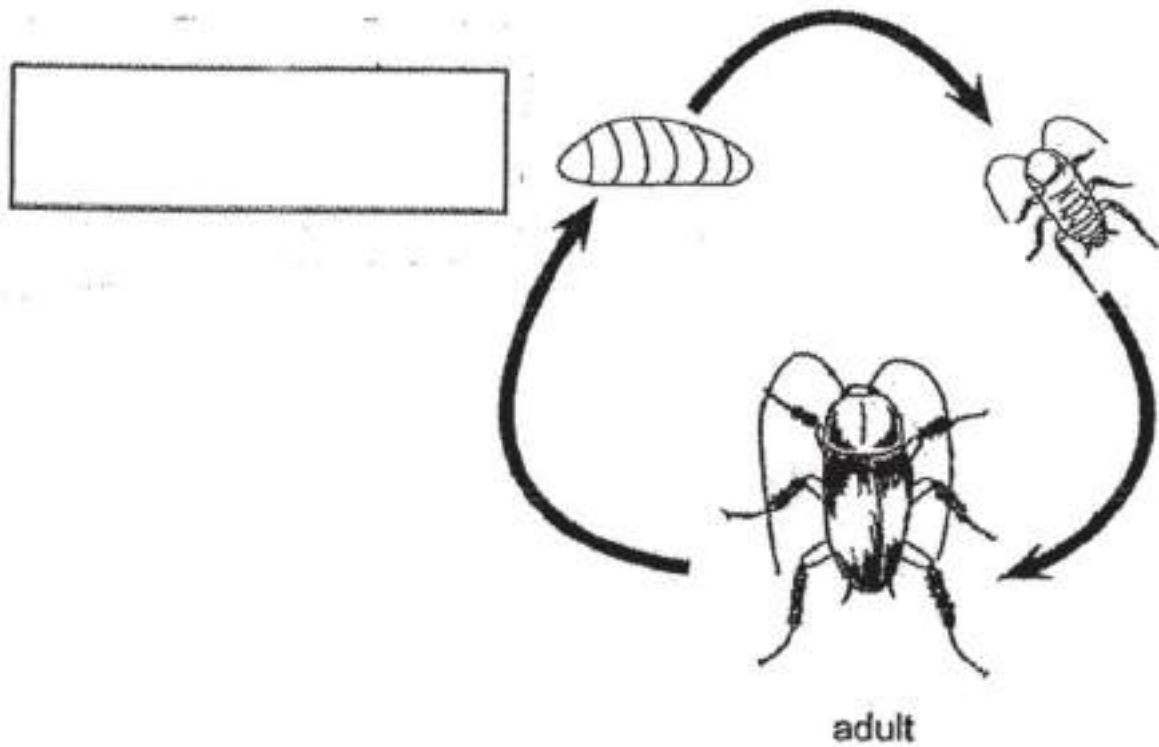
3. [ ] Marble

**Question 35 of 63**

Primary 4 Science (Term 4)

1 pt

The diagram shows the life cycle of a cockroach.

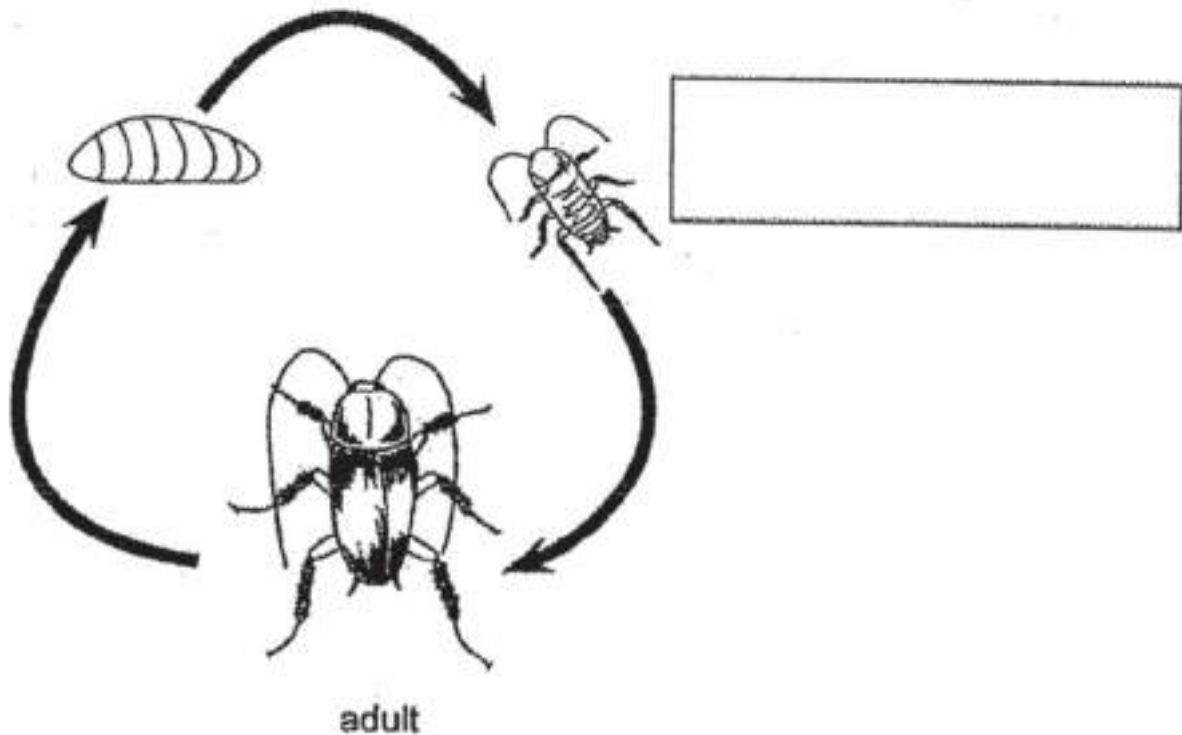


Label the missing stage above.

## Question 36 of 63

Primary 4 Science (Term 4)

1 pt



Label the missing stage above.

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## Question 37 of 63

Primary 4 Science (Term 4)

1 pt

The table describes the life cycles of four animals, P, Q, R and S.

Description	P	Q	R	S
Young resembles the adult	x	✓	✓	✓
Has three stages in its life cycle	x	✓	x	✓
Young goes through moulting	✓	✓	x	x

Based on the table above, which animal, P, Q, R or S best represents a cockroach? (1 mark)

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## Question 38 of 63

Primary 4 Science (Term 4)

0 pts

The table describes the life cycles of four animals, P, Q, R and S.

Description	P	Q	R	S
Young resembles the adult	x	✓	✓	✓
Has three stages in its life cycle	x	✓	x	✓
Young goes through moulting	✓	✓	x	x

Based on the table above, state two similarities in the life cycles of animals R and S. (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.*

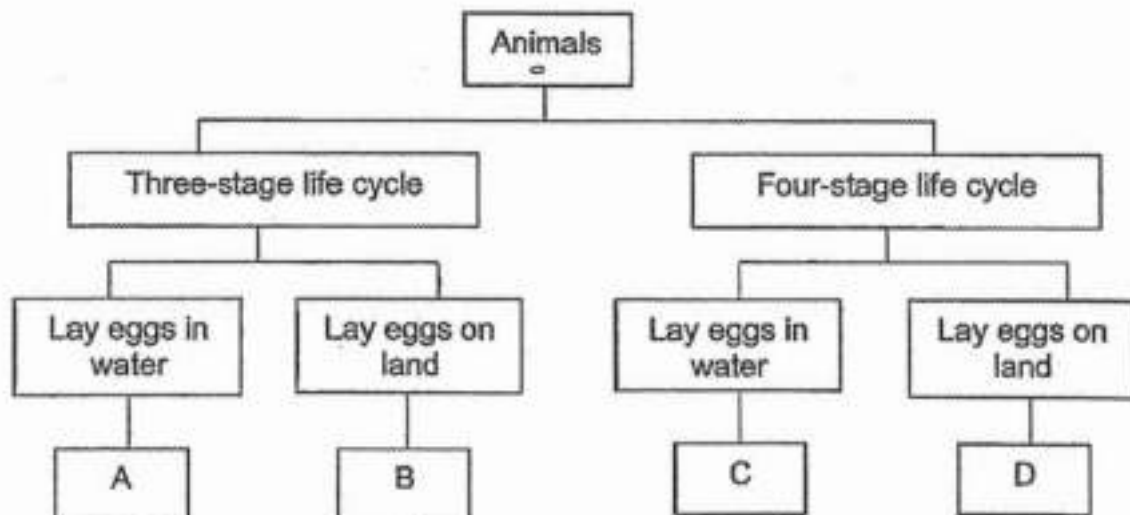
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 39 of 63

Primary 4 Science (Term 4)

0 pts

Study the classification chart carefully.



Based on the classification chart above, describe animal A. (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.*

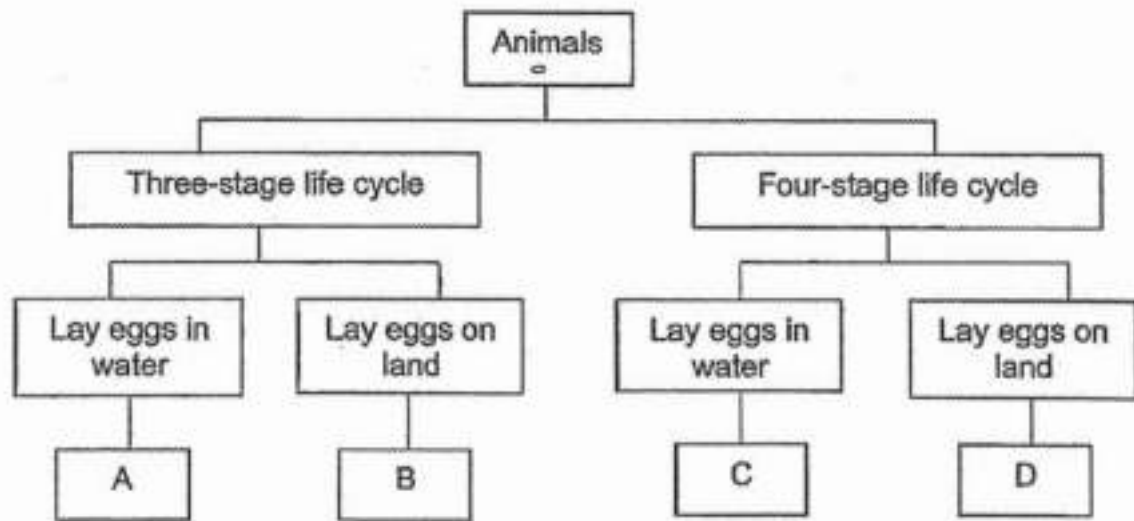
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 40 of 63

Primary 4 Science (Term 4)

0 pts

Study the classification chart carefully.



State one difference between animals B and C. (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.*

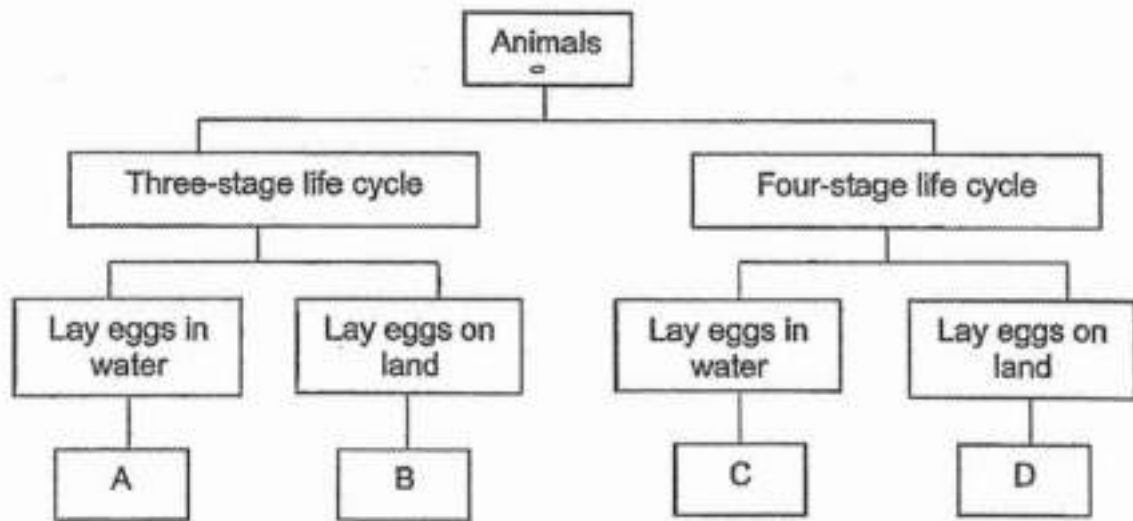
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 41 of 63

Primary 4 Science (Term 4)

1 pt

Study the classification chart carefully.



Based on the classification chart above, which animal A, B, C or D, best represents a mosquito?

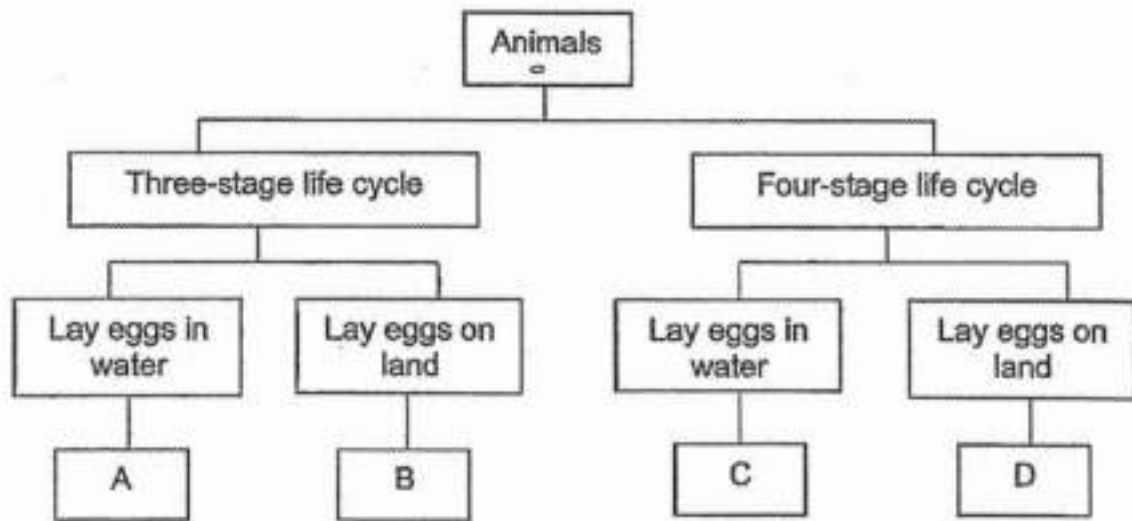
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## Question 42 of 63

Primary 4 Science (Term 4)

0 pts

Study the classification chart carefully.



A mosquito is considered a pest as it spreads diseases such as dengue fever. The picture shows a stage in the life cycle of a mosquito.



Based on the picture, explain how applying a layer of oil on the surface of the pond water can help to control the number of adult mosquito. [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.*

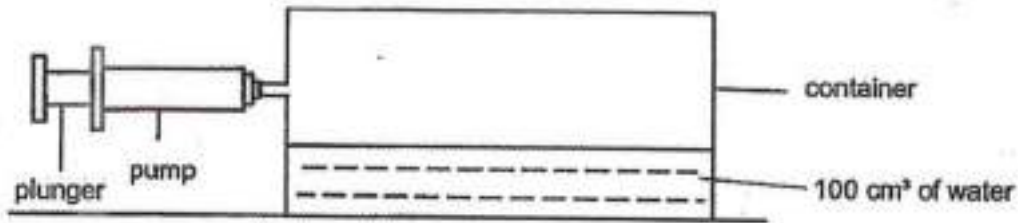


**Question 43 of 63**

Primary 4 Science (Term 4)

0 pts

Peter has a container with a capacity of  $250 \text{ cm}^3$ . It has  $100 \text{ cm}^3$  of water inside. He connected a pump to the container and pushed the plunger of the pump once. Each push pumps  $50 \text{ cm}^3$  of air into the container.



In the table below, write down the volume of air in the container before and after air was pumped into the container. (2 marks)

Volume of air in container before air was pumped ( $\text{cm}^3$ )	Volume of air in container after air was pumped ( $\text{cm}^3$ )

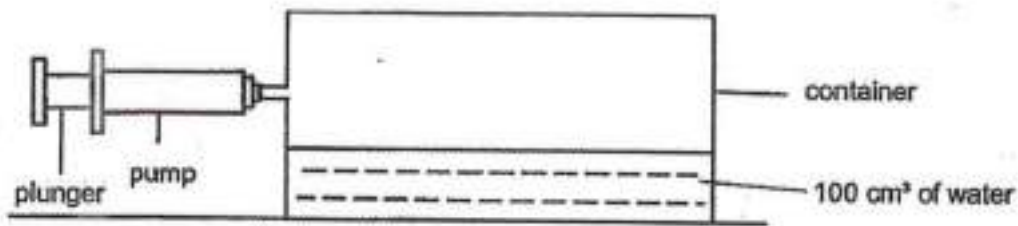
*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*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 44 of 63**

Primary 4 Science (Term 4) 0 pts

Peter has a container with a capacity of  $250 \text{ cm}^3$ . It has  $100 \text{ cm}^3$  of water inside. He connected a pump to the container and pushed the plunger of the pump once. Each push pumps  $50 \text{ cm}^3$  of air into the container.



What property of air is shown in this experiment? (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.*

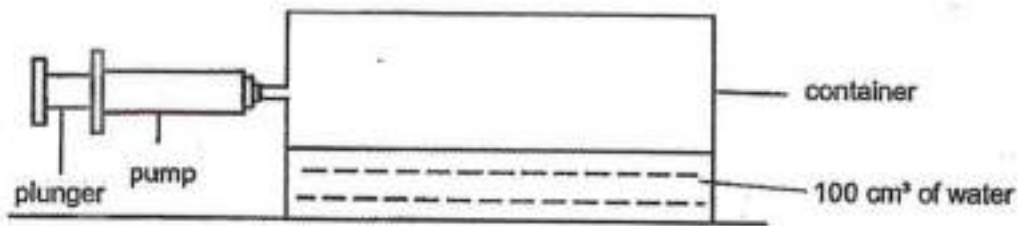
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## Question 45 of 63

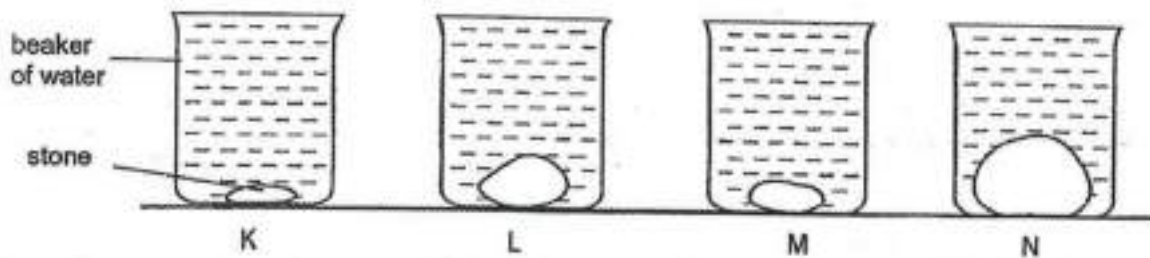
Primary 4 Science (Term 4)

1 pt

Peter has a container with a capacity of  $250 \text{ cm}^3$ . It has  $100 \text{ cm}^3$  of water inside. He connected a pump to the container and pushed the plunger of the pump once. Each push pumps  $50 \text{ cm}^3$  of air into the container.



Next, Peter took four identical beakers, K, L, M and N. He placed four stones of a different volume into each beaker. Then, he filled each beaker to the brim with water as shown in the diagram.



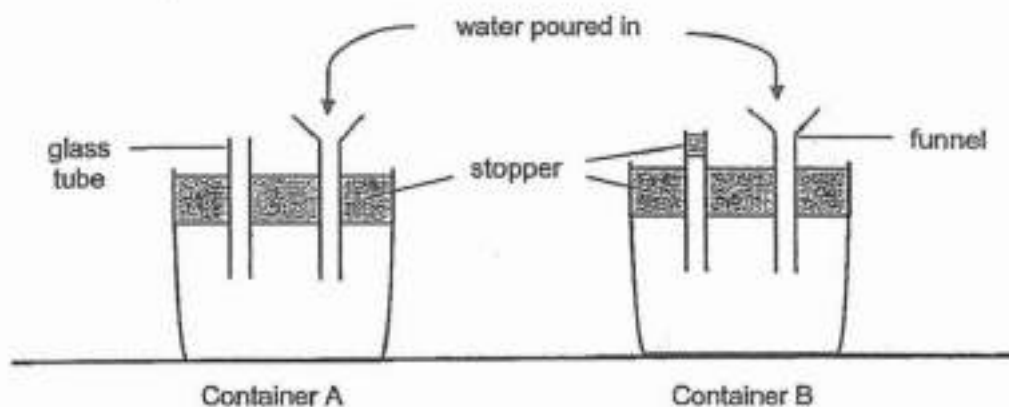
Which of the beakers, K, L, M or N is filled with the greatest amount of water? [1]

## Question 46 of 63

Primary 4 Science (Term 4)

1 pt

Jason conducted an experiment using two similar containers A and B, each fitted with a glass tube and a funnel. He put a stopper in the glass tube that was fitted into container B. Next, he poured water into each funnel.



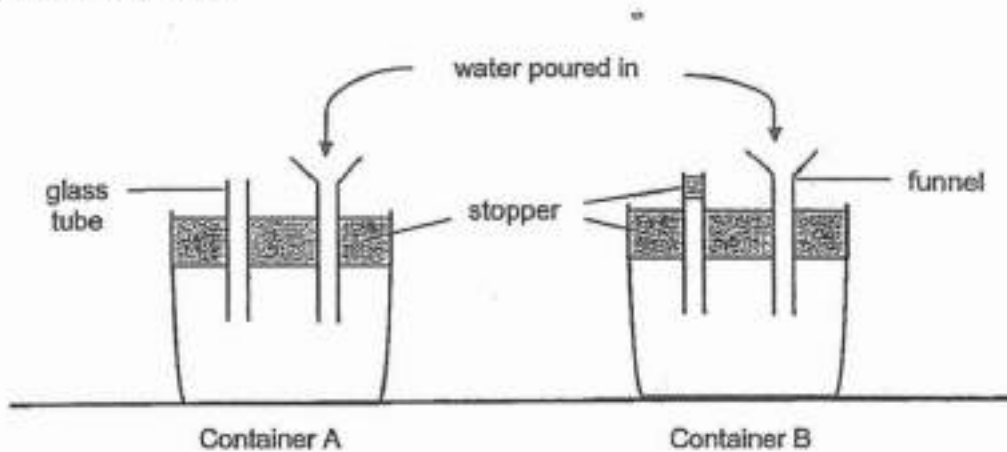
In which container, A or B, can water flow in faster?

## Question 47 of 63

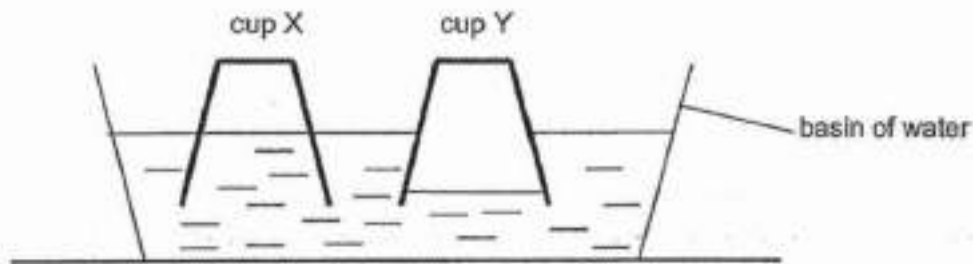
Primary 4 Science (Term 4)

1 pt

Jason conducted an experiment using two similar containers A and B, each fitted with a glass tube and a funnel. He put a stopper in the glass tube that was fitted into container B. Next, he poured water into each funnel.



Jason conducted another experiment with two identical plastic cups X and Y. He inverted both cups into a basin of water. One of the cups had a hole at the bottom while the other cup did not have any holes. The result of the experiment is as shown.



Based on the diagram above, which cup, X or Y had a hole at the bottom?

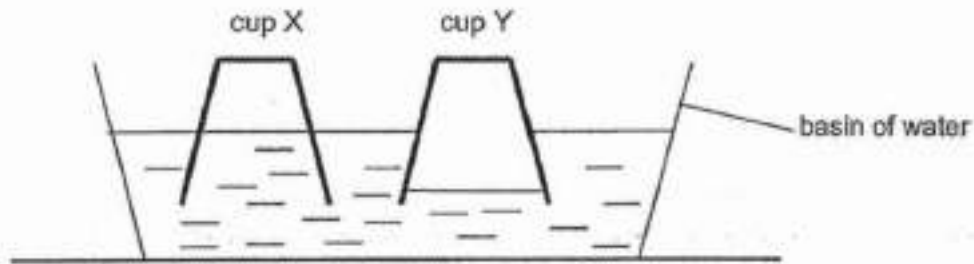
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**Question 48 of 63**

Primary 4 Science (Term 4)

0 pts

Jason conducted another experiment with two identical plastic cups X and Y. He inverted both cups into a basin of water. One of the cups had a hole at the bottom while the other cup did not have any holes. The result of the experiment is as shown.



Explain your answer in the previous question. (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.*

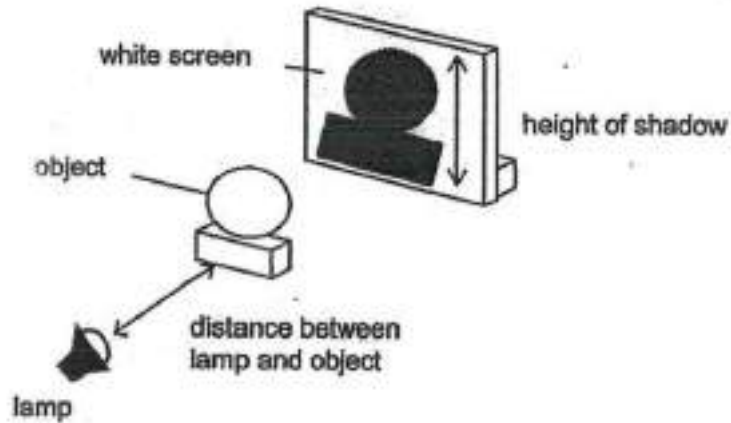
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## Question 49 of 63

Primary 4 Science (Term 4)

1 pt

Terry wanted to find out how the distance between the lamp and the object affects the height of the shadow formed on the screen. He set up an experiment as shown.



He recorded his results in the table below.

Distance between lamp and object (cm)	Height of shadow formed on the white screen (cm)
20	7
15	9
10	11
5	13

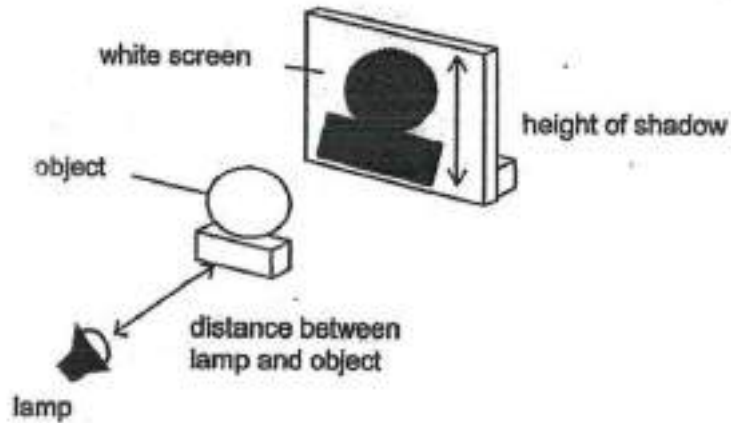
Predict the height of the shadow formed on the white screen if the distance between the lamp and the object is 8 cm.

Ans: \_\_\_\_ cm

## Question 50 of 63

Primary 4 Science (Term 4) 0 pts

Terry wanted to find out how the distance between the lamp and the object affects the height of the shadow formed on the screen. He set up an experiment as shown.



He recorded his results in the table below.

Distance between lamp and object (cm)	Height of shadow formed on the white screen (cm)
20	7
15	9
10	11
5	13

Where should the object be placed so that the height of the shadow is the same as the height of the object? (1 mark)

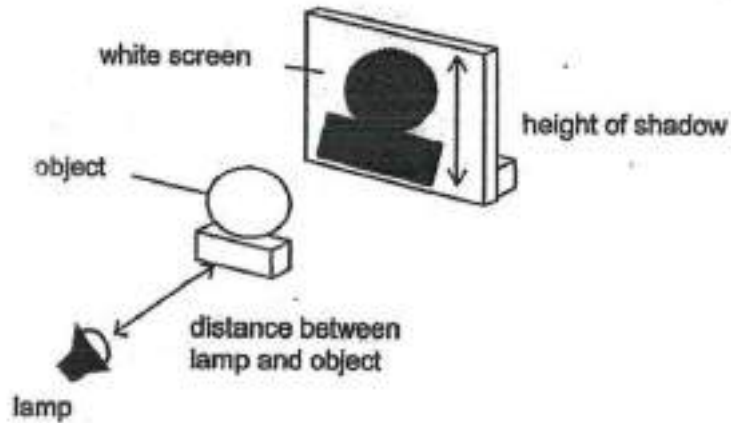
*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*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 51 of 63

Primary 4 Science (Term 4) 0 pts

Terry wanted to find out how the distance between the lamp and the object affects the height of the shadow formed on the screen. He set up an experiment as shown.



He recorded his results in the table below.

Distance between lamp and object (cm)	Height of shadow formed on the white screen (cm)
20	7
15	9
10	11
5	13

Based on the results in the table above, what could Terry conclude? (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.*

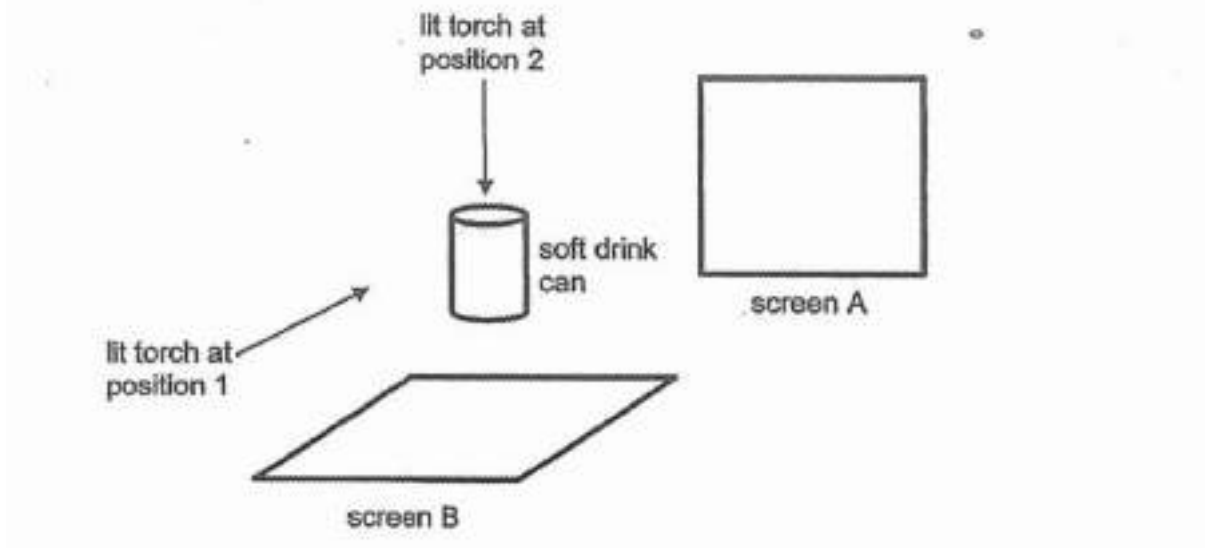
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*



## Question 52 of 63

Primary 4 Science (Term 4) 2 pts

Devi shines a lit torch on a soft drink can from positions 1 and 2. As a result, shadows are formed on screens A and B.



Name the shape of the shadow that Devi will see on screens A and B. Fill in the blank using the following helping words.

1. [ ] Screen A: \_\_\_\_\_

A. Triangle

2. [ ] Screen B: \_\_\_\_\_

B. Square

C. Circle

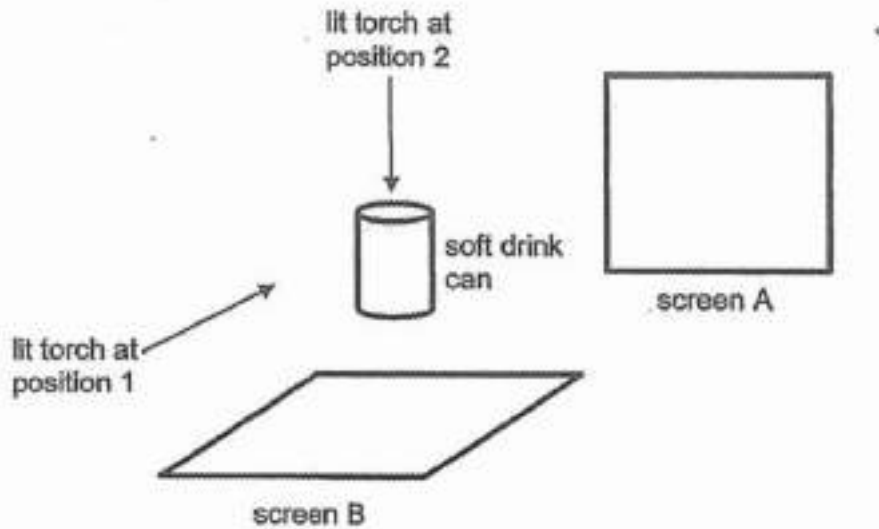
D. Rectangle

**Question 53 of 63**

Primary 4 Science (Term 4)

0 pts

Devi shines a lit torch on a soft drink can from positions 1 and 2. As a result, shadows are formed on screens A and B.



Based on your answer in the previous question, what does this experiment show about the effect of the position of light source on shadows formed? (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.*

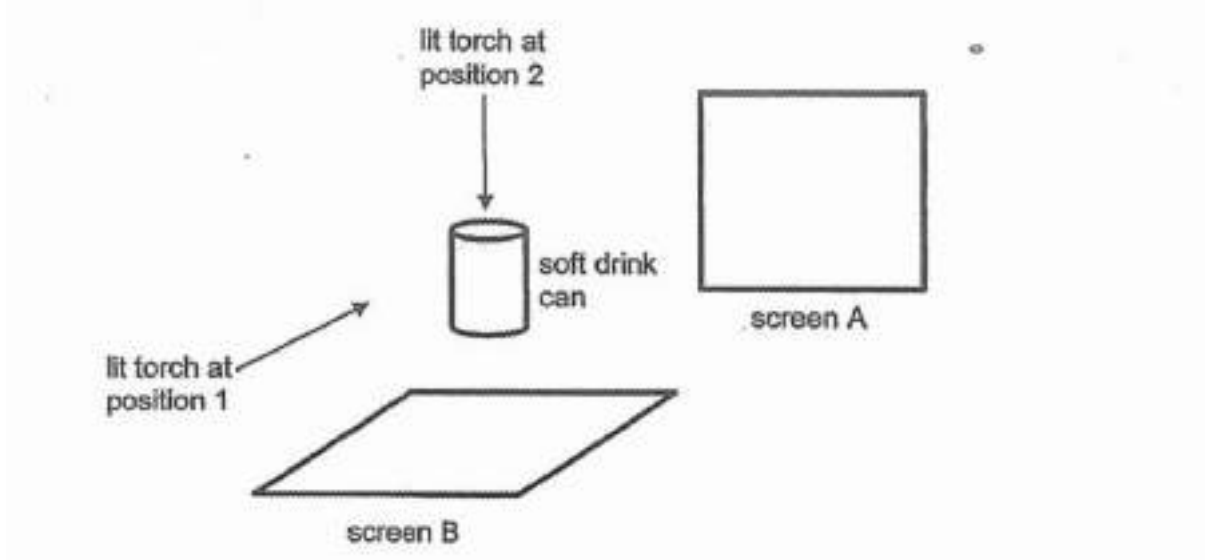
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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**Question 54 of 63**

Primary 4 Science (Term 4) 0 pts

Devi shines a lit torch on a soft drink can from positions 1 and 2. As a result, shadows are formed on screens A and B.



Describe how the size of the shadow will change when the screen is moved closer to the object. (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.*

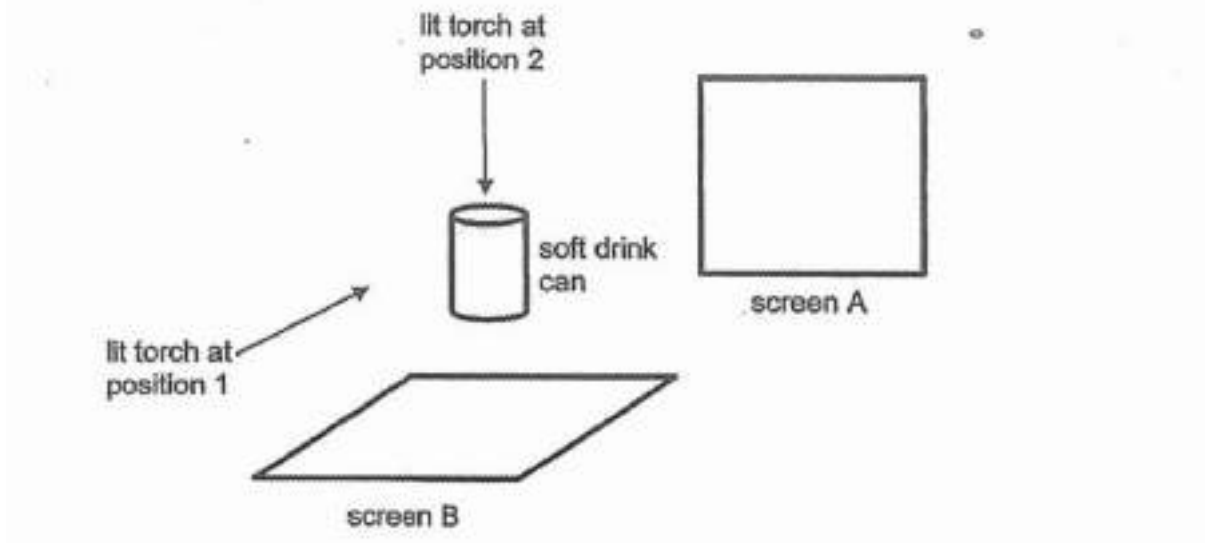
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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**Question 55 of 63**

Primary 4 Science (Term 4) 0 pts

Devi shines a lit torch on a soft drink can from positions 1 and 2. As a result, shadows are formed on screens A and B.



Explain your answer to the previous question. (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.*

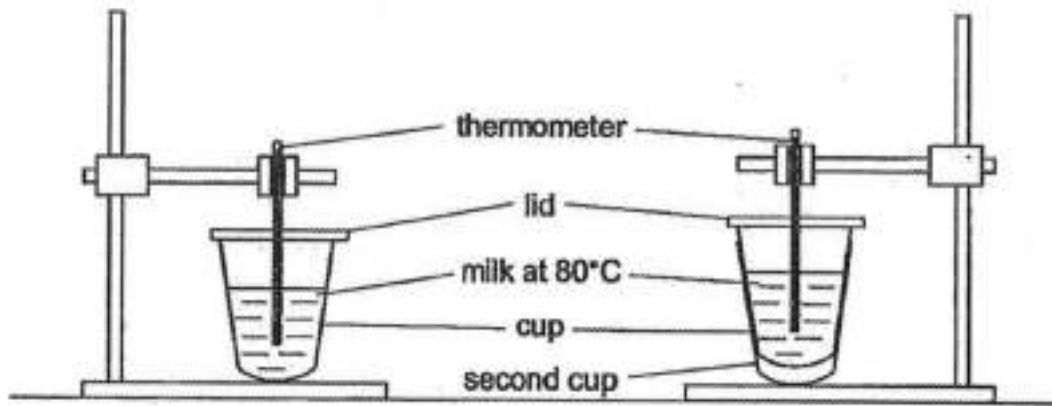
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 56 of 63

Primary 4 Science (Term 4)

1 pt

Jimmy prepared the following set-ups as shown in the diagram.



The temperature of the milk in each set-up is recorded at ten-minute intervals as shown in the table below.

	Time (minute)					
	0	10	20	30	40	50
Temperature (°C) of milk in set-up A	80	60	40	25	25	25
Temperature (°C) of milk in set-up B	80	70	60	40	25	25

Which set-up, A or B kept the milk warmer for a longer period of time?

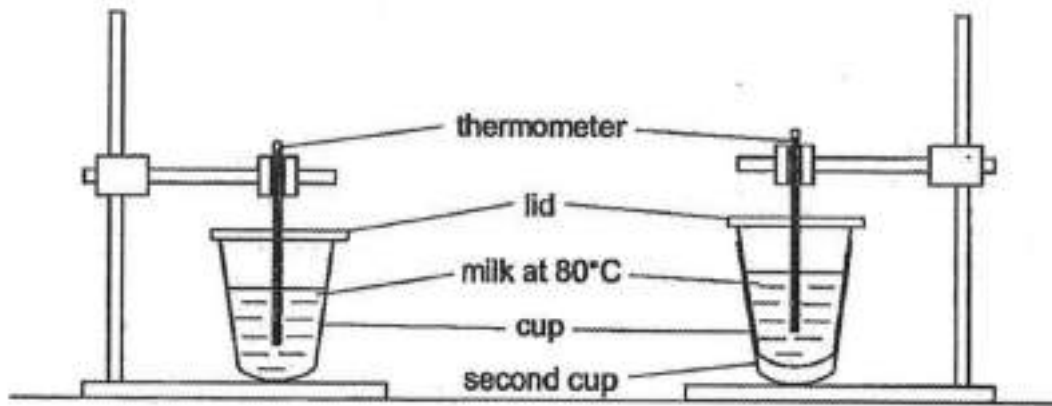
Set-up \_\_\_\_\_

## Question 57 of 63

Primary 4 Science (Term 4)

0 pts

Jimmy prepared the following set-ups as shown in the diagram.



The temperature of the milk in each set-up is recorded at ten-minute intervals as shown in the table below.

	Time (minute)					
	0	10	20	30	40	50
Temperature (°C) of milk in set-up A	80	60	40	25	25	25
Temperature (°C) of milk in set-up B	80	70	60	40	25	25

Explain how the set-up stated in the previous question helped keep the milk warmer? (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.*

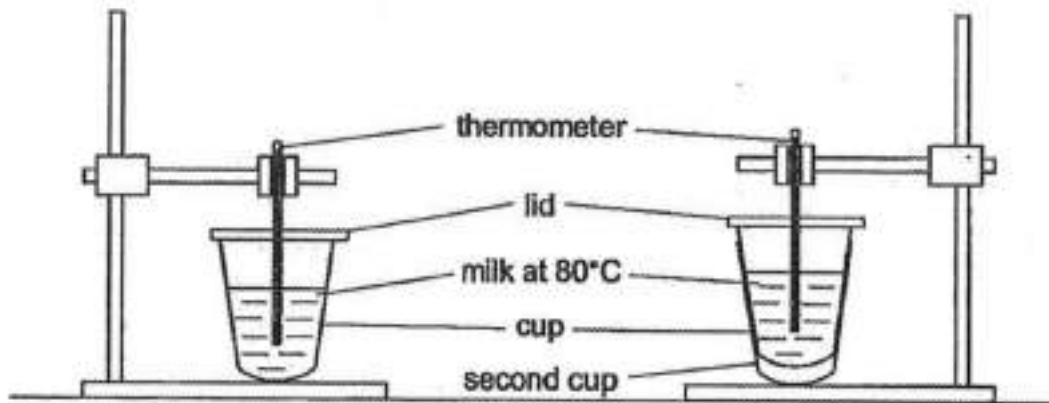
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 58 of 63

Primary 4 Science (Term 4)

0 pts

Jimmy prepared the following set-ups as shown in the diagram.



The temperature of the milk in each set-up is recorded at ten-minute intervals as shown in the table below.

	Time (minute)					
	0	10	20	30	40	50
Temperature (°C) of milk in set-up A	80	60	40	25	25	25
Temperature (°C) of milk in set-up B	80	70	60	40	25	25

Explain why there was no difference in the temperature of milk between both set-ups from the 40<sup>th</sup> minute onwards. (1 mark)

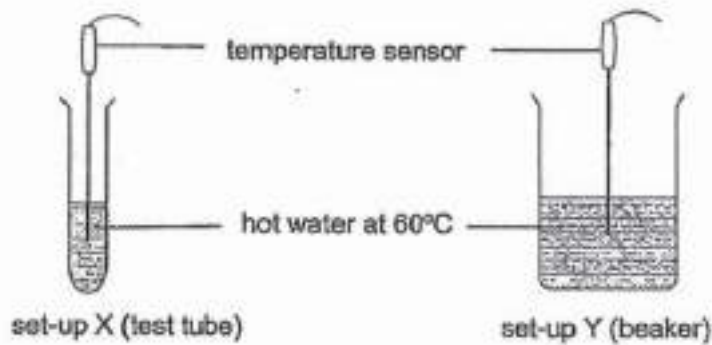
*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*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 59 of 63

Primary 4 Science (Term 4) 0 pts

Kieran carried out an experiment to investigate how fast heat is lost from a test tube and a beaker as shown. The test tube and beaker each contained a different amount of hot water at 60°C.



The temperature of water in the test tube and beaker was taken using a temperature sensor over a period of time. The table below shows the results.

	Temperature of water (°C)					
set-up X (test tube)	60	45	33	29	28	28
set-up Y (beaker)	60	52	45	39	35	32

What is the changed variable in Kieran's experiment? (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.*

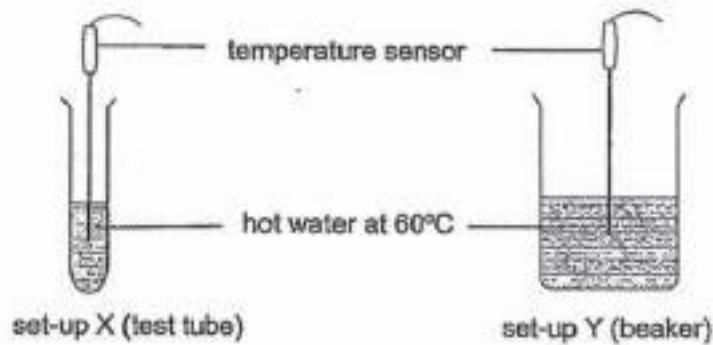
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*



## Question 60 of 63

Primary 4 Science (Term 4) 0 pts

Kieran carried out an experiment to investigate how fast heat is lost from a test tube and a beaker as shown. The test tube and beaker each contained a different amount of hot water at 60°C.



The temperature of water in the test tube and beaker was taken using a temperature sensor over a period of time. The table below shows the results.

	Temperature of water (°C)					
set-up X (test tube)	60	45	33	29	28	28
set-up Y (beaker)	60	52	45	39	35	32

Based on the results above, what can you conclude about how fast heat is lost from the hot water in set-up X compared to the hot water in set-up Y? Explain your answer. (2 marks)

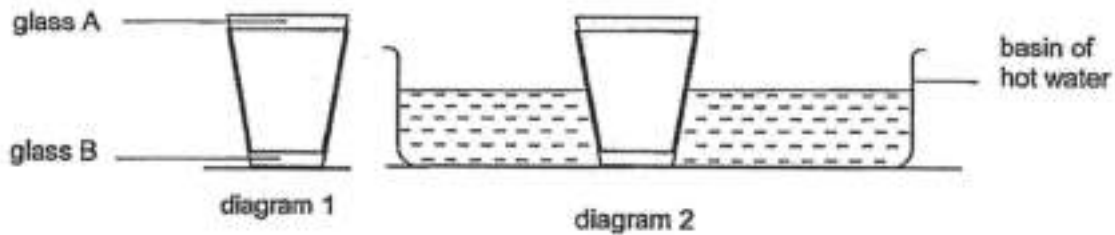
*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*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 61 of 63**

Primary 4 Science (Term 4) 0 pts

Kelvin had two glasses that were tightly stuck as shown in diagram 1. He managed to separate them by dipping glass B into a basin of hot water as shown in diagram 2.



Explain how placing glass B into a basin of hot water enabled Kelvin to separate the two glasses. (1 mark)

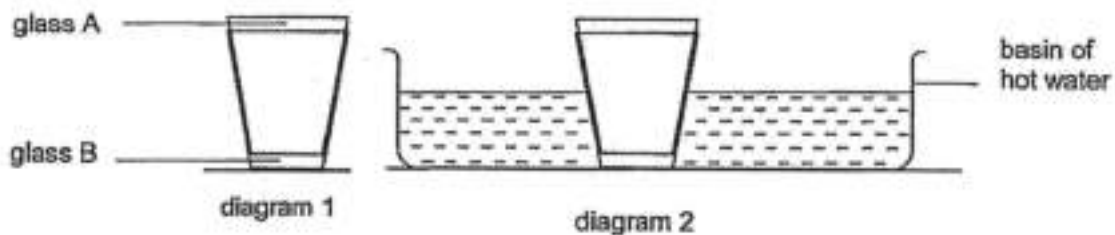
This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

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 62 of 63**

Primary 4 Science (Term 4) 0 pts

Kelvin had two glasses that were tightly stuck as shown in diagram 1. He managed to separate them by dipping glass B into a basin of hot water as shown in diagram 2.



State another method to separate the two glasses. (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.*

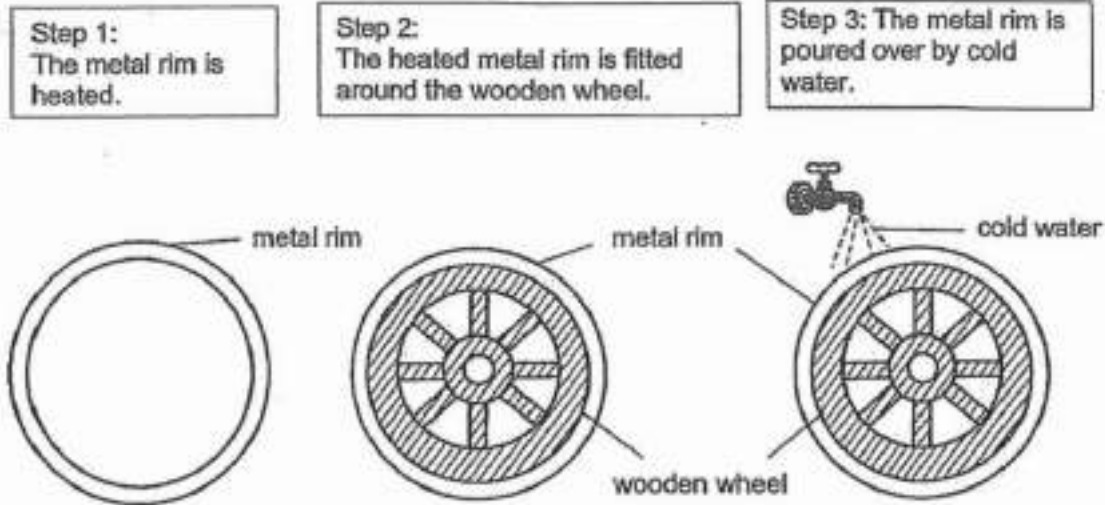
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 63 of 63

Primary 4 Science (Term 4)

0 pts

A metal rim can be fitted tightly around a wooden wheel using the following steps as shown in the diagrams below.



Based on Kelvin's experiment, explain how each of the following steps helped fit the metal rim tightly around the wooden wheel. (2 marks)

Step	Explanation
1. The metal rim is heated.	
3. The metal rim is poured over by cold water.	

*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.*