

Test: Primary 6 Science (Prelim) - Raffles (Y0)

Points: 68.5 points

Name: _____

Score: _____

Date: _____

Signature: _____

Select multiple choice answers with a cross or tick:

Only select one answer

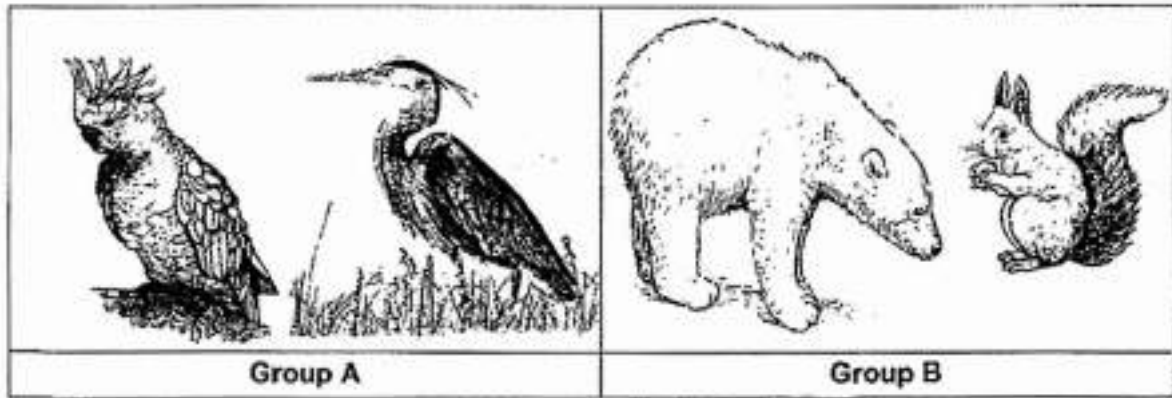
Can select multiple answers

Question 1 of 64

Primary 6 Science (Prelim) 2 pts

For each question, four options are given. One of them is the correct answer, make your choice below. (28 x 2 marks)

Study the animals in groups A and B below.



Which of the following is correct? A tick (✓) shows the presence of the characteristic(s) of the animals.

| | | | | |
|--------------------------|--------------|--------------------------------------|---------------------------------|------------------|
| <input type="radio"/> A) | Group | Has body covering of feathers | Has body covering of fur | Has wings |
| | A | | ✓ | ✓ |
| <input type="radio"/> B) | A | ✓ | | ✓ |
| <input type="radio"/> C) | B | | ✓ | ✓ |
| <input type="radio"/> D) | B | ✓ | | |

Question 2 of 64

Primary 6 Science (Prelim) 2 pts

Which of the following statements about fungi are true?

- A Yeast is a type of fungi.
- B Fungi reproduce by spores.
- C Fungi are not made of cells.
- D Fungi do not have chloroplasts.

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

Question 3 of 64

Primary 6 Science (Prelim)

2 pts

Observations made on animals P and Q are recorded in the table below.

| Characteristic \ Animal | Has 3-staged life cycle | Lay eggs on land | Young resembles adult |
|-------------------------|-------------------------|------------------|-----------------------|
| P | ✓ | ✓ | ✓ |
| Q | ✓ | | |

Which of the following represents animals P and Q correctly?

- A)

| | |
|-----------|----------|
| Animal P | Animal Q |
| butterfly | mosquito |
- B)

| | |
|-----------|----------|
| Animal P | Animal Q |
| butterfly | frog |
- C)

| | |
|-----------|----------|
| Animal P | Animal Q |
| cockroach | frog |
- D)

| | |
|-----------|----------|
| Animal P | Animal Q |
| cockroach | mosquito |

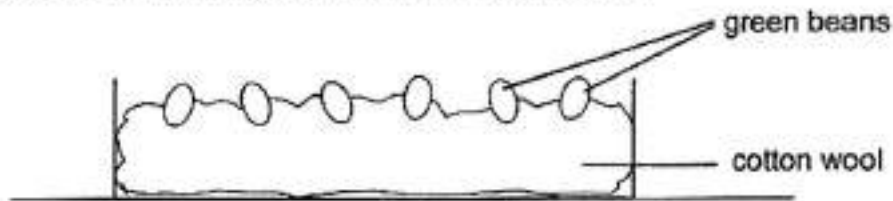
Question 4 of 64

Primary 6 Science (Prelim)

2 pts

Bethany investigated the conditions needed for the germination of green beans.

She prepared three set-ups, A, B and C, each containing same amount of cotton wool and the same number of green beans as shown below.



The table below shows the conditions each set-up was exposed to.

| Set up | Conditions | | |
|--------|-------------|------------------|-------------------|
| | Cotton wool | Temperature (°C) | Presence of light |
| A | damp | 30 | yes |
| B | dry | 30 | yes |
| C | damp | 0 | no |

Bethany recorded the observations on the green beans after five days.

Which of the following observations correctly matches the reason?

- A)

| Observation | Reason |
|-------------------------------------|--|
| Green beans in set-up A germinated. | Air, water and warmth needed for germination were present. |
- B)

| Observation | Reason |
|-------------------------------------|--|
| Green beans in set-up A germinated. | Air, water and warmth needed for germination were present. |
- C)

| Observation | Reason |
|--|-----------------------|
| Green beans in set-up B did not germinate. | No light was present. |
- D)

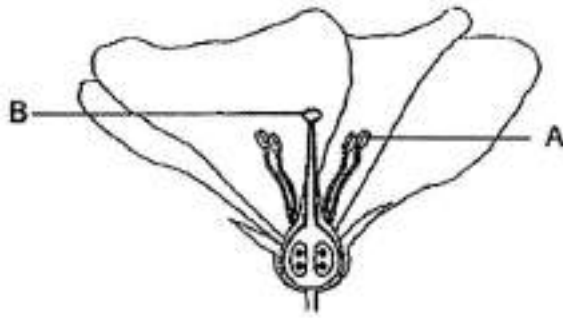
| Observation | Reason |
|--|-----------------------------------|
| Green beans in set-up C did not germinate. | No warmth and light were present. |

Question 5 of 64

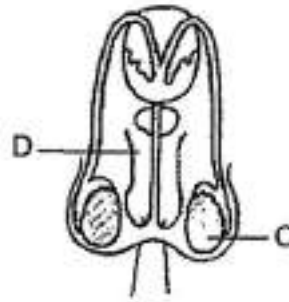
Primary 6 Science (Prelim)

2 pts

The diagrams below show the reproductive systems of a plant and human.



Plant reproductive system



Human reproductive system

Which of the following represent the parts involved in producing the male reproductive cells?

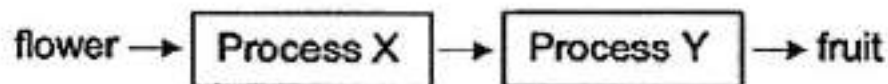
- A) A and C
- B) A and D
- C) B and C
- D) B and D

Question 6 of 64

Primary 6 Science (Prelim)

2 pts

The diagram below shows how a fruit is developed from a flower.



Which of the following correctly identifies processes X and Y?

- A)

| | |
|----------------|---------------|
| Process X | Process Y |
| seed dispersal | fertilisation |
- B)

| | |
|---------------|----------------|
| Process X | Process Y |
| fertilisation | seed dispersal |
- C)

| | |
|---------------|-------------|
| Process X | Process Y |
| fertilisation | pollination |
- D)

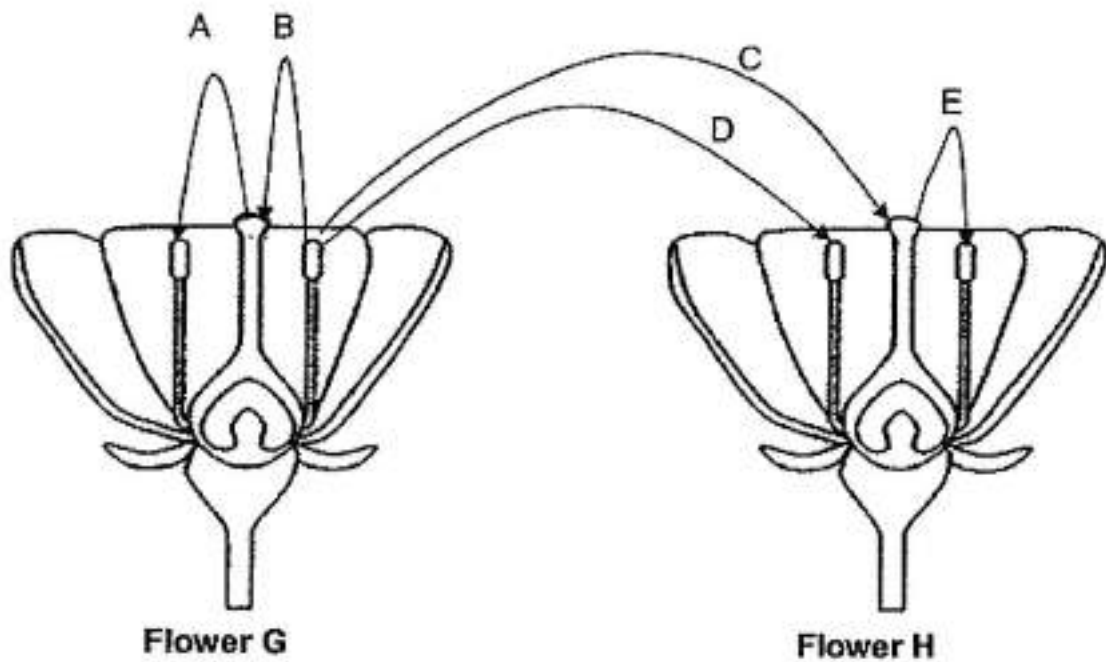
| | |
|-------------|---------------|
| Process X | Process Y |
| pollination | fertilisation |

Question 7 of 64

Primary 6 Science (Prelim)

2 pts

The diagrams below show two flowers, G and H, from the same type of plant.



Which is / are the arrow(s) that represent(s) the process pollination?

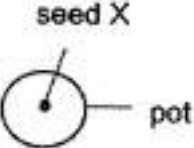
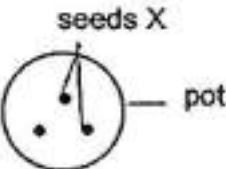
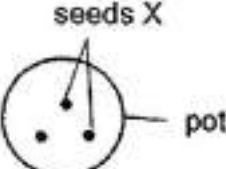
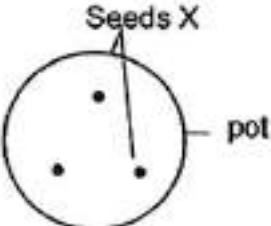
-
- A) C
 B) D
 C) B and C only
 D) A and E only

Question 8 of 64

Primary 6 Science (Prelim)

2 pts

Sarah wanted to find out if overcrowding affects plant growth. The table below shows four different set-ups, P, Q, R and S, each containing the same amount of soil. She watered each set-up with the same amount of water daily.

| Set-ups | Conditions | | |
|---------|---|-----------|------------------|
| | Size of pot and number of seeds | Location | Temperature (°C) |
| P |  | classroom | 25 |
| Q |  | garden | 35 |
| R |  | garden | 25 |
| S |  | garden | 35 |

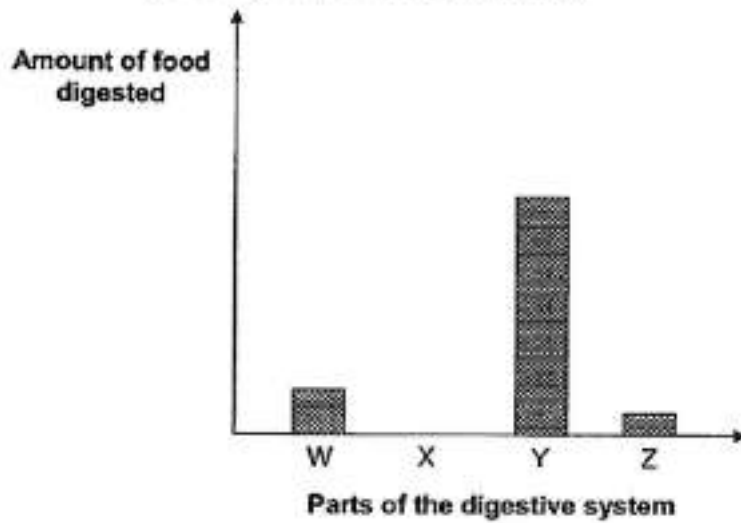
Which set-ups, P, Q, R and S, should Sarah use to ensure a fair test?

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

Question 9 of 64

Primary 6 Science (Prelim) 2 pts

The chart below shows the amount of food digested in various parts of the human digestive system six hours after a meal.



Based on the graph above, which one of the following best represents W, X, Y and Z respectively?

- A)

| | | | |
|---------|-----------------|-----------------|-------|
| W | X | Y | Z |
| stomach | large intestine | small intestine | mouth |
- B)

| | | | |
|---------|-------|-----------------|-----------------|
| W | X | Y | Z |
| stomach | mouth | small intestine | large intestine |
- C)

| | | | |
|-------|-----------------|-----------------|---------|
| W | X | Y | Z |
| mouth | small intestine | large intestine | stomach |
- D)

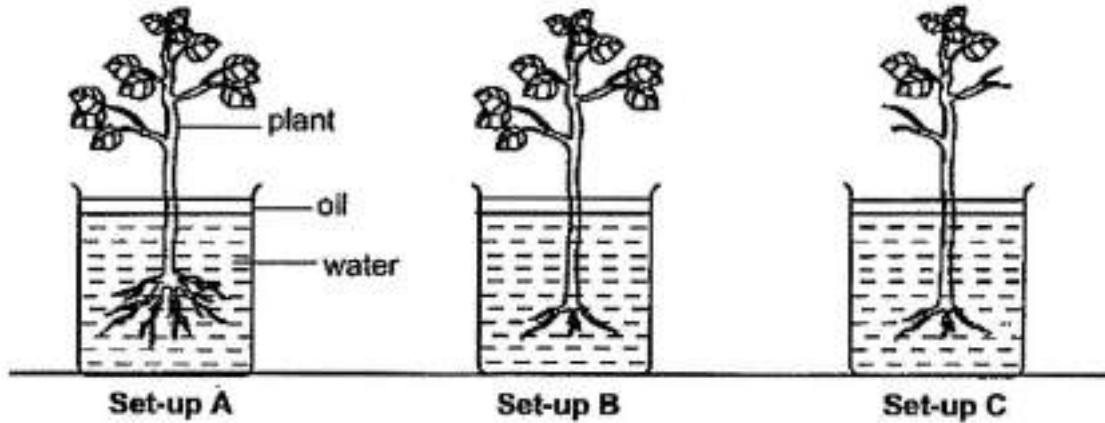
| | | | |
|-----------------|-----------------|-------|---------|
| W | X | Y | Z |
| small intestine | large intestine | mouth | stomach |

Question 10 of 64

Primary 6 Science (Prelim)

2 pts

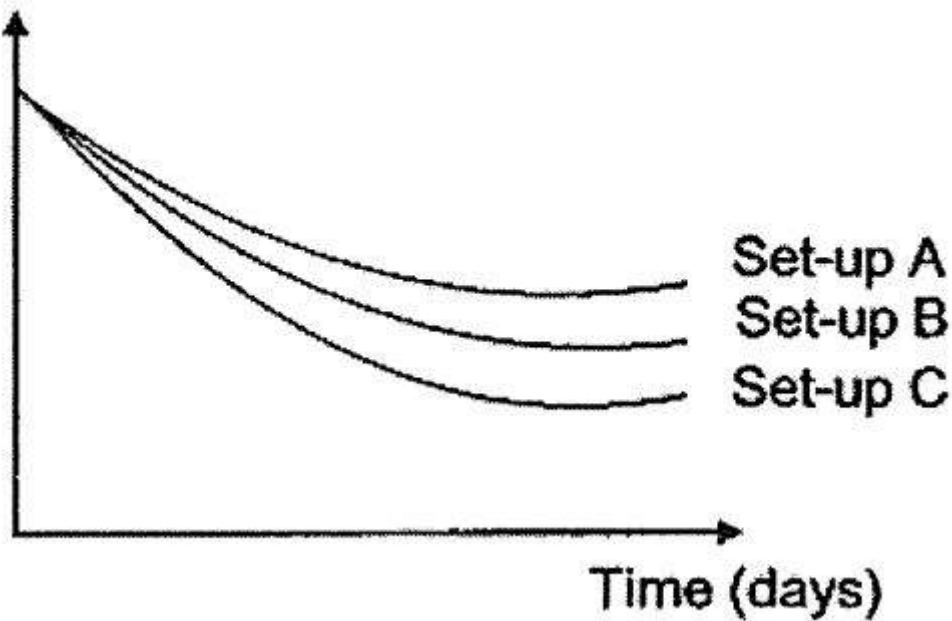
Norris prepared set-ups A, B and C using the same type of plant. She removed some roots from the plants in set-ups B and C and removed some leaves from the plant in set-up C as shown in the diagrams below. She observed the volume of water left in each set-up over a period of one week.



Which of the following graphs best represents the results obtained for the three set-ups, A, B and C?

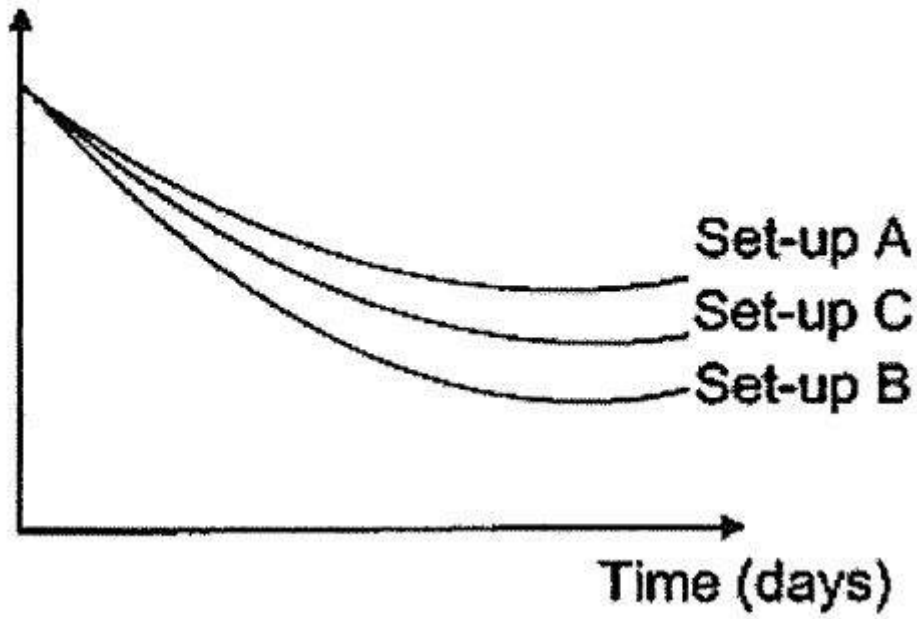
A)

Volume of water left (ml)



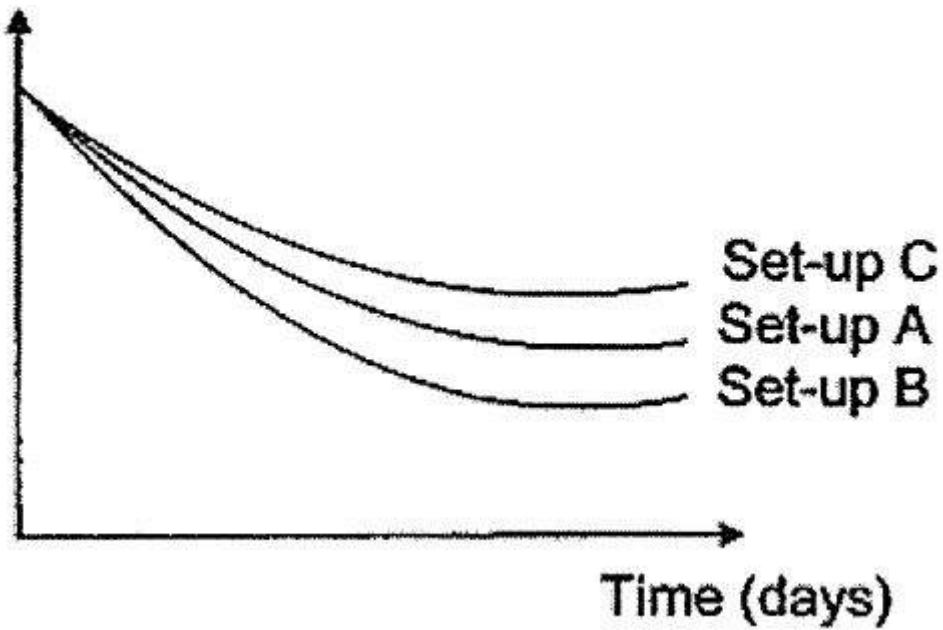
B)

Volume of water left (ml)



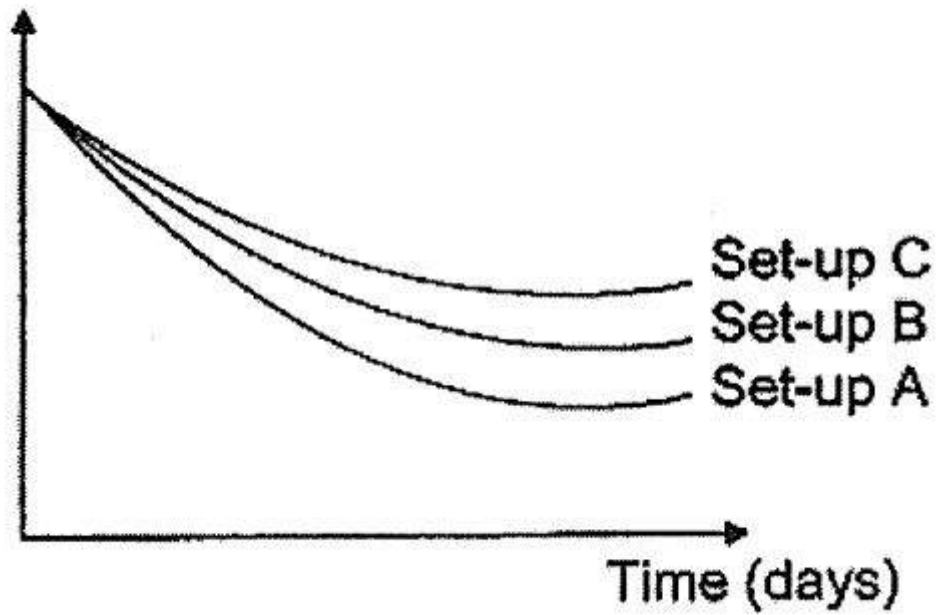
C)

Volume of water left (ml)



D)

Volume of water left (ml)

**Question 11 of 64**

Primary 6 Science (Prelim)

2 pts

Which one of the following parts is found in a root cell but not in a cheek cell?

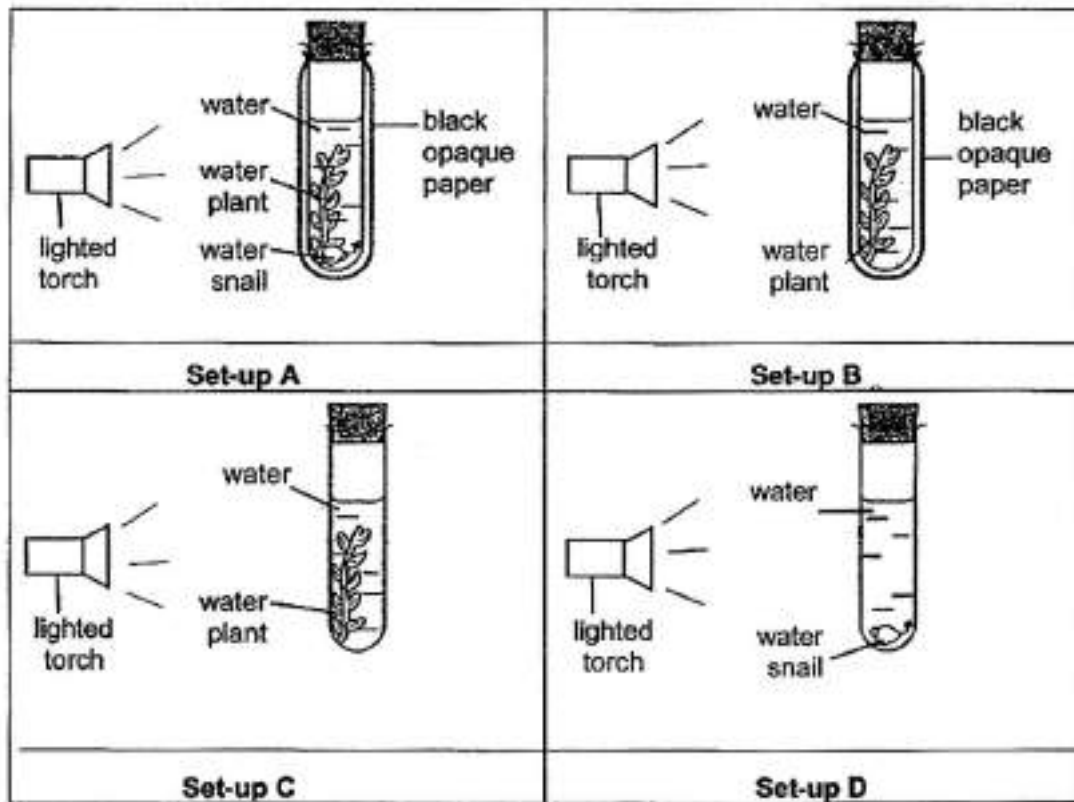
- A) cell wall
- B) cytoplasm
- C) chloroplast
- D) cell membrane

Question 12 of 64

Primary 6 Science (Prelim)

2 pts

Denise prepared set-ups A, B, C and D as shown below.



She measured the concentration of carbon dioxide in the water in each test-tube before the experiment and two hours later.

In which test-tube would there be a decrease in the concentration of carbon dioxide after two hours?

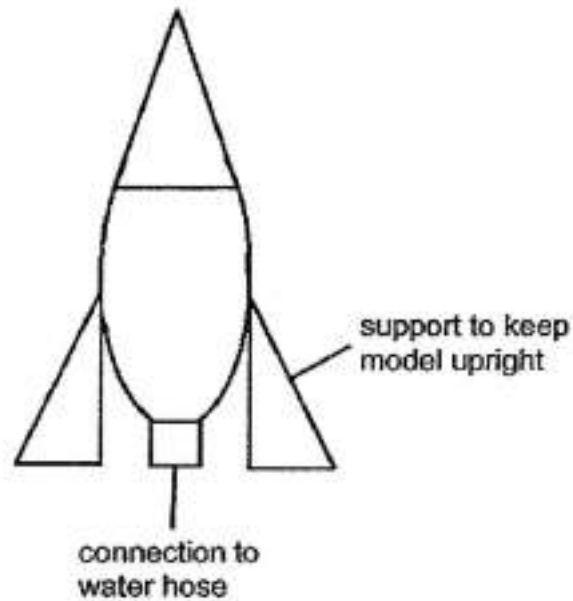
- A) Set-up A
 B) Set-up B
 C) Set-up C
 D) Set-up D

Question 13 of 64

Primary 6 Science (Prelim)

2 pts

Gabi wanted to construct a flying model as shown in the diagram below.



She wanted to conduct a test launch where the flying model would fly to a height of one metre when filled with water and that it would not be damaged when it landed on the ground.

Which of the following properties must she consider while selecting the materials to build her flying model?

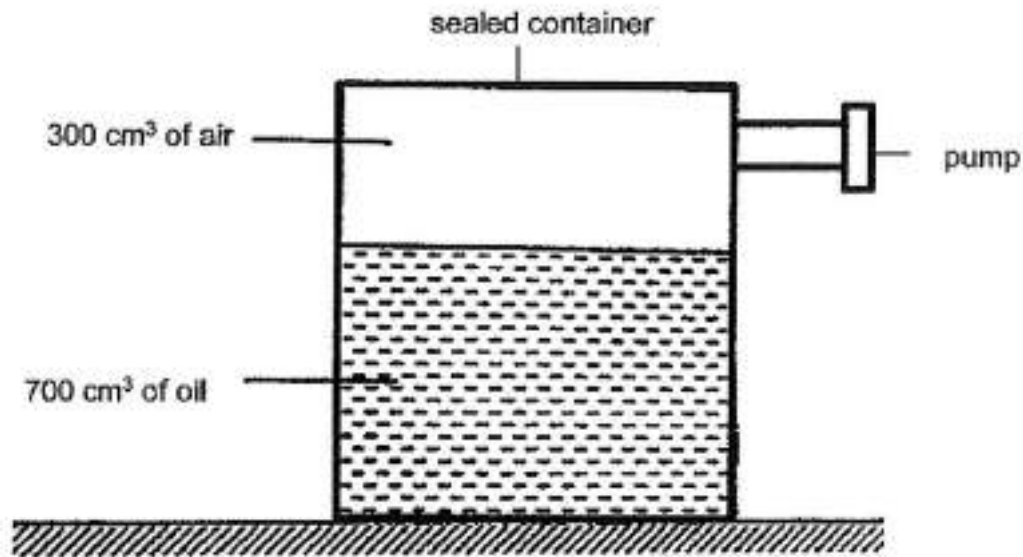
-
- A) Strength and waterproof
 - B) Strength and conductor of heat
 - C) Conductor of heat and flexibility
 - D) Conductor of electricity and waterproof

Question 14 of 64

Primary 6 Science (Prelim)

2 pts

A sealed container holds 700 cm^3 of oil and 300 cm^3 of air as shown below. Another 200 cm^3 of oil is removed and 100 cm^3 of air is added to the container through the pump.



What is the final volume of air in the container?

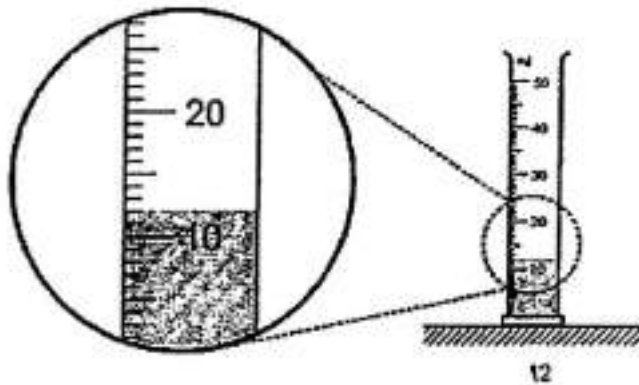
- A) 300 cm^3
- B) 400 cm^3
- C) 500 cm^3
- D) 600 cm^3

Question 15 of 64

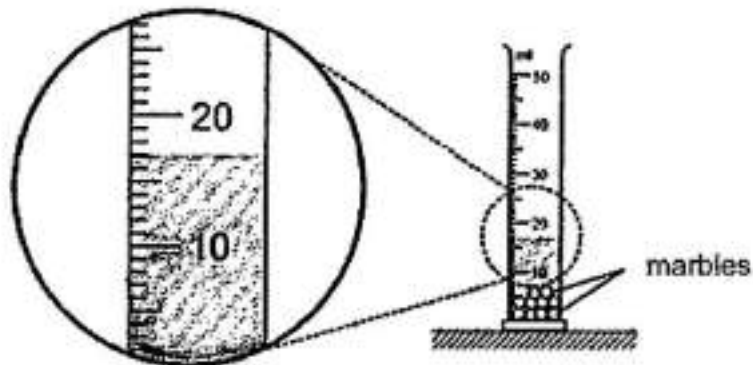
Primary 6 Science (Prelim)

2 pts

Tim had a bag of identical marbles. He wanted to find the volume of each marble. He filled a measuring cylinder with water as shown in diagram below.



Tim then put ten marbles in the measuring cylinder of water. His result is shown below



Based on Tim's experiment, which of the following is correct?

- A Marbles occupy space.
- B Water has no definite volume.
- C The volume of each marble is 5 cm^3 .

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

Question 16 of 64

Primary 6 Science (Prelim) 2 pts

The table below shows the freezing point and boiling point of three substances, X, Y and Z.

| Substance | Freezing point (°C) | Boiling point (°C) |
|-----------|---------------------|--------------------|
| X | 6 | 80 |
| Y | 17 | 118 |
| Z | 43 | 181 |

Which of the substances, X, Y or Z, is/are liquid(s) at 90°C?

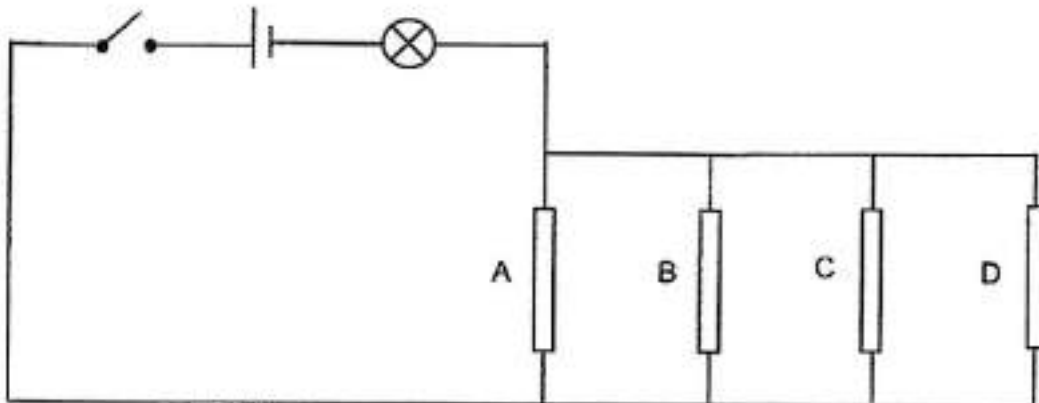
-
- A) X only
- B) Y only
- C) Y and Z only
- D) X and Z only

Question 17 of 64

Primary 6 Science (Prelim)

2 pts

Dora wanted to investigate the electrical conductivity of rods A, B, C and D. She constructed the circuit as shown below.



She recorded her observation below when she removed certain rods and closed the switch.

| Rod(s) removed from the circuit | Bulb lighted up |
|---------------------------------|-----------------|
| D | yes |
| B and C | yes |
| B, C and D | no |
| A, B, D | no |

Based on her observation, which of the following conclusions about the rods A, B, C and D is correct?

- A)

| | |
|-------------------------|-------------------------|
| Electrical conductor(s) | Electrical insulator(s) |
| A, C | B, D |
- B)

| | |
|-------------------------|-------------------------|
| Electrical conductor(s) | Electrical insulator(s) |
| B, C, D | A |
- C)

| | |
|-------------------------|-------------------------|
| Electrical conductor(s) | Electrical insulator(s) |
| A | B, C, D |
- D)

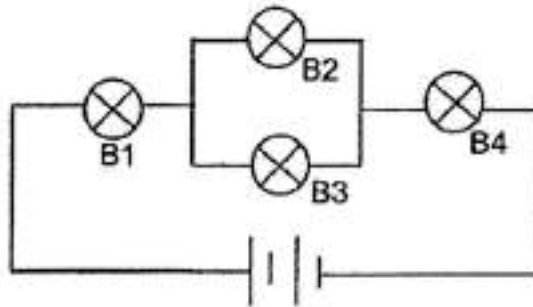
| | |
|-------------------------|-------------------------|
| Electrical conductor(s) | Electrical insulator(s) |
| B, D | A, C |

Question 18 of 64

Primary 6 Science (Prelim)

2 pts

The circuit below consists of identical bulbs, B1, B2, B3 and B4, all lit up.



Which of the following is likely to be observed when only one of the bulbs in the above circuit is fused at one time?

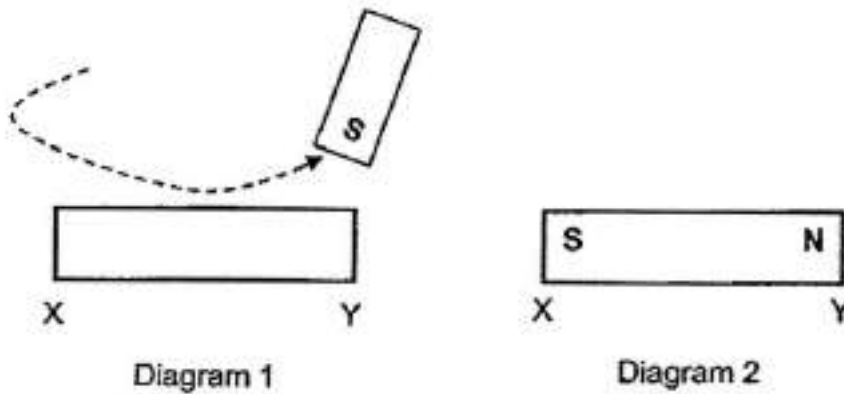
- A)
- | Bulb that was fused | Smallest number of bulbs remaining lit | Largest number of bulbs remaining lit |
|---------------------|--|---------------------------------------|
| B1 or B4 | 0 | 3 |
- B)
- | Bulb that was fused | Smallest number of bulbs remaining lit | Largest number of bulbs remaining lit |
|---------------------|--|---------------------------------------|
| B1 or B3 | 1 | 2 |
- C)
- | Bulb that was fused | Smallest number of bulbs remaining lit | Largest number of bulbs remaining lit |
|---------------------|--|---------------------------------------|
| B2 or B3 | 2 | 3 |
- D)
- | Bulb that was fused | Smallest number of bulbs remaining lit | Largest number of bulbs remaining lit |
|---------------------|--|---------------------------------------|
| B2 or B4 | 0 | 3 |

Question 19 of 64

Primary 6 Science (Prelim)

2 pts

A steel bar XY was magnetised using the "stroke" method as shown in Diagram 1 below. Diagram 2 shows the magnetic poles of XY after it was magnetised.



Another steel bar below was magnetised using two magnets as shown in Diagram 3.

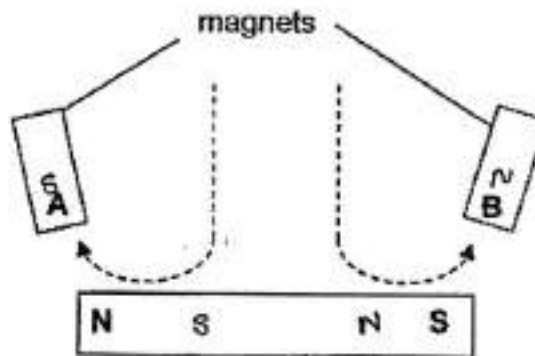


Diagram 3

Identify the poles at A and B used to magnetise the steel bar respectively.

- A)

| Poles at A | Poles at B |
|------------|------------|
| N | S |
- B)

| Poles at A | Poles at B |
|------------|------------|
| S | N |
- C)

| Poles at A | Poles at B |
|------------|------------|
| N | N |
- D)

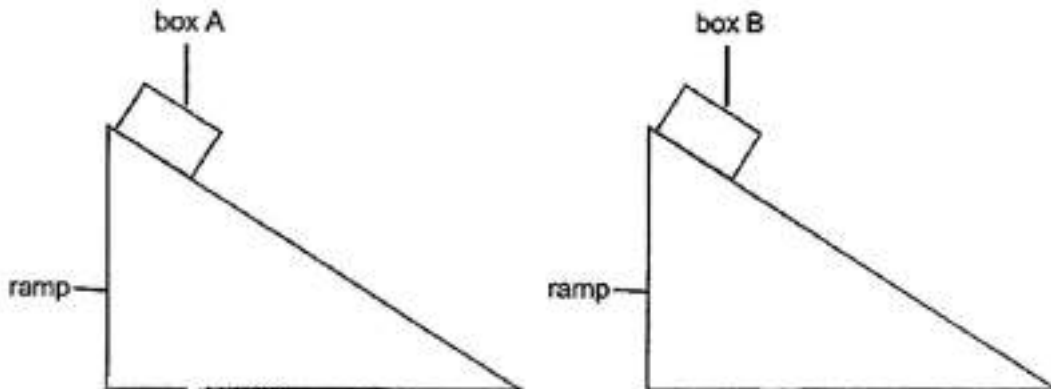
| Poles at A | Poles at B |
|------------|------------|
| S | S |

Question 20 of 64

Primary 6 Science (Prelim)

2 pts

Ali, Beth, Cailing, and Devi prepared the following set-ups using identical boxes A and B as shown below.



The boxes were placed at the same starting point on the ramps. They observed that box B would slide down the ramp but box A remained stationary.

The pupils made the following statements:

| | |
|---------|---|
| Ali | The gravitational force acting on both boxes was the same. |
| Beth | The gravitational force acting on box B was more than that of box A. |
| Cailing | The surface of the ramp where box A was placed on was smoother. |
| Devi | The frictional force between box B and the surface of the ramp was less than that of box A and the surface of the ramp. |

Which of the pupils made the correct statements?

- A) Ali and Cailing
- B) Ali and Devi
- C) Beth and Cailing
- D) Beth and Devi

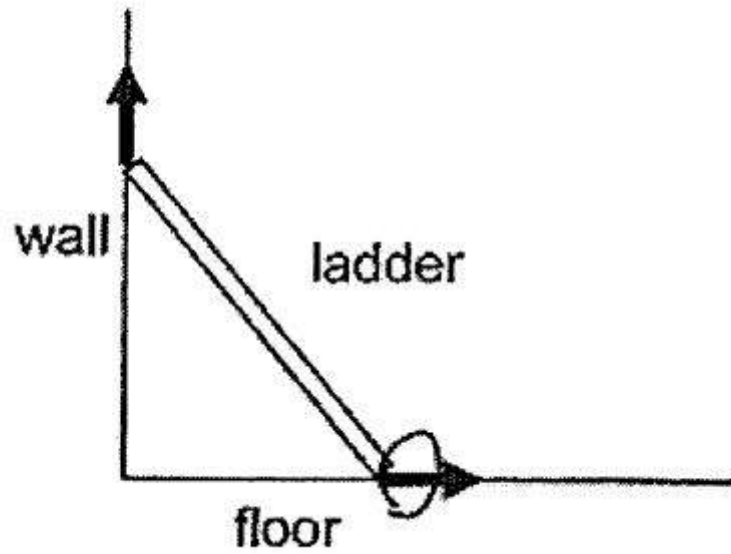
Question 21 of 64

Primary 6 Science (Prelim)

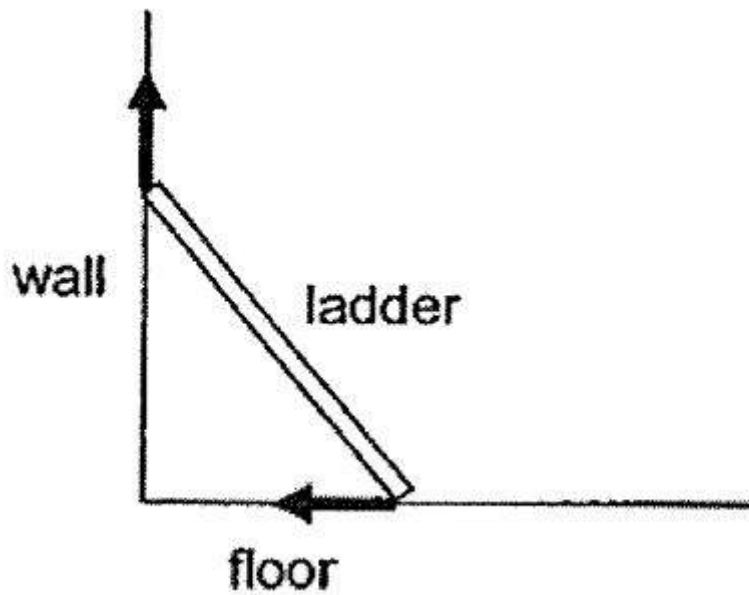
2 pts

Which of the following arrows shows the direction of frictional force acting on a ladder which is leaning against the wall?

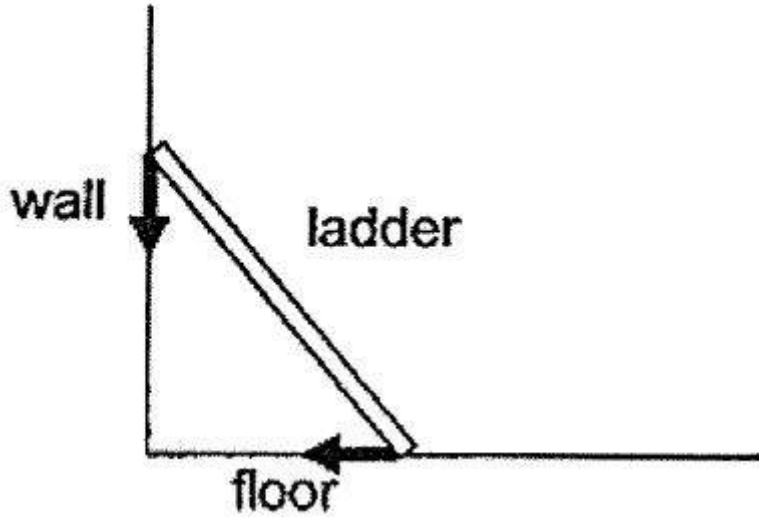
A)



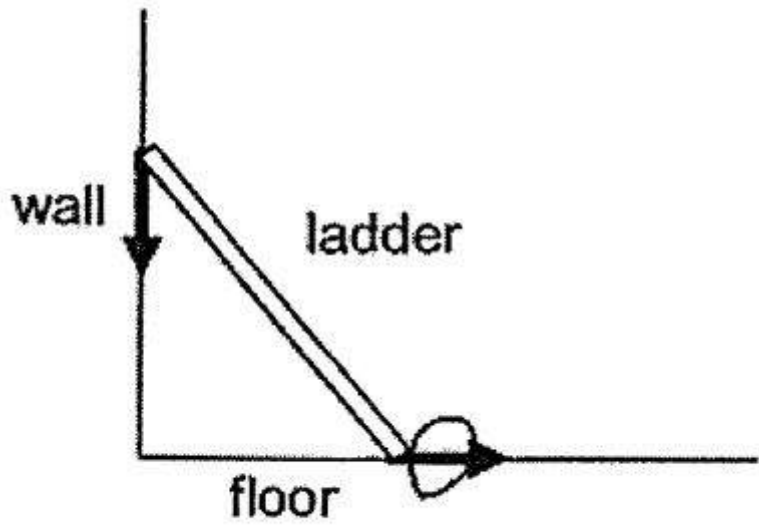
B)



C)



D)



Question 22 of 64

Primary 6 Science (Prelim)

2 pts

Stella carried out an experiment to find out which rubber ball, P, Q or R, travelled the furthest distance when it was rolled down the same ramp as shown below. The rubber balls were identical in size but of different masses.



For each ball, she repeated the experiment three times. She recorded the distance travelled by each ball in the table below. However, she did not carry out a fair test when conducting the experiment with ball R.

| | Distance travelled by balls (cm) | | | |
|---|----------------------------------|---------------------|---------------------|---------|
| | 1 st try | 2 nd try | 3 rd try | Average |
| P | 141 | 143 | 146 | 143.3 |
| Q | 183 | 184 | 180 | 182.3 |
| R | 90 | 125 | 680 | 142.5 |

Based on the results of the above experiment, which of the following statements is/are most likely to be true?

- A The amount of gravitational force acting on ball Q was the least.
- B The way she released ball R was not the same for all the three tries.
- C Ball R was released at different positions on the ramp at each repeated experiment.

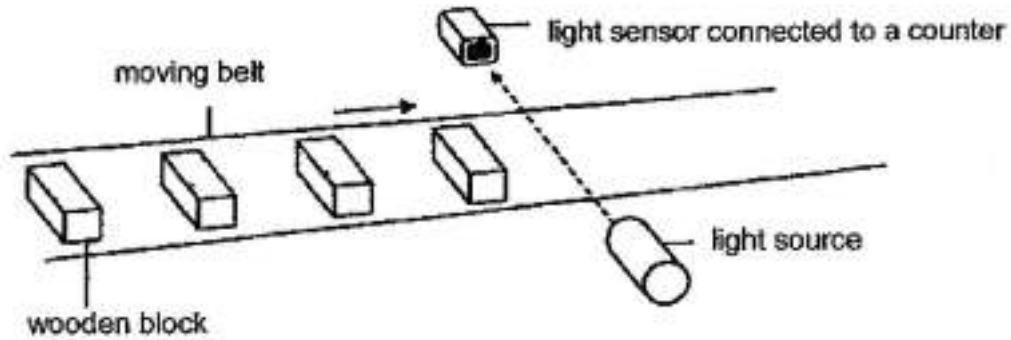
- A) A only
- B) B only
- C) B and C only
- D) A, B and C

Question 23 of 64

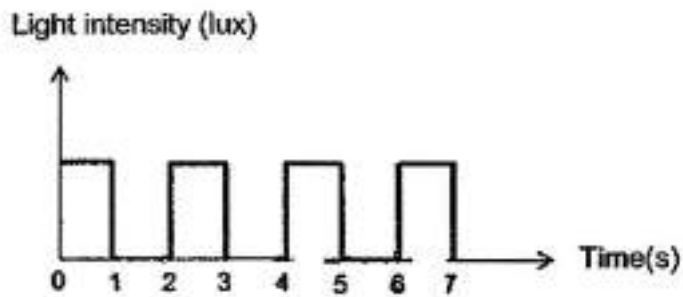
Primary 6 Science (Prelim)

2 pts

A light sensor is used to count the number of wooden blocks on a moving belt in a factory as shown in the set-up below.



The belt moves at a constant speed. The workers plotted the results in the graph shown below.



Based on the graph above, how many wooden blocks were counted in five seconds?

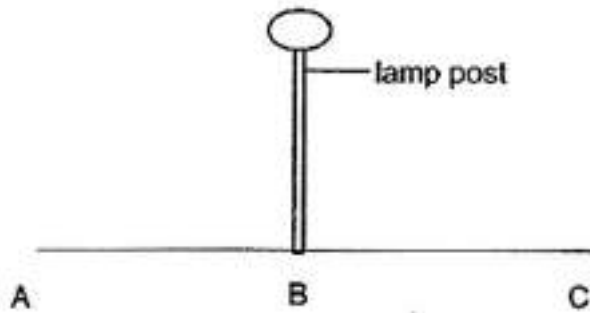
- A) 2
- B) 3
- C) 4
- D) 5

Question 24 of 64

Primary 6 Science (Prelim)

2 pts

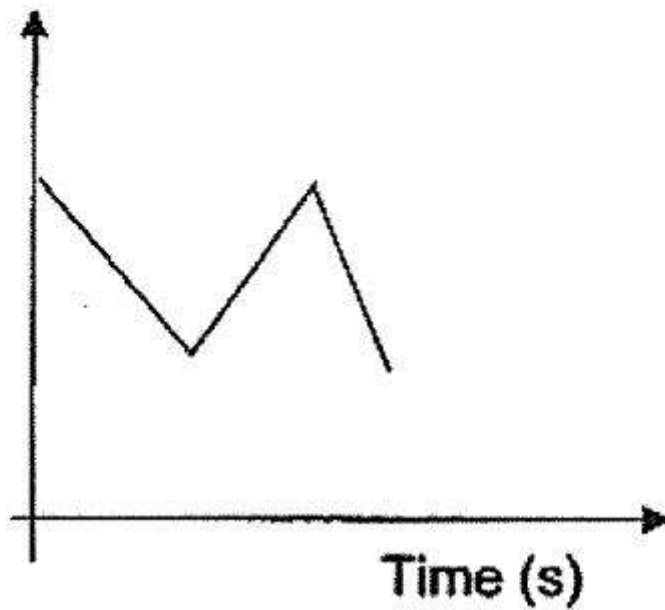
The diagram below shows a lamp post. The distance from A to B is identical to the distance from B to C. David walked under the lighted lamp post from B to C, then C to A passing B again. He increased his speed while walking from B to A.



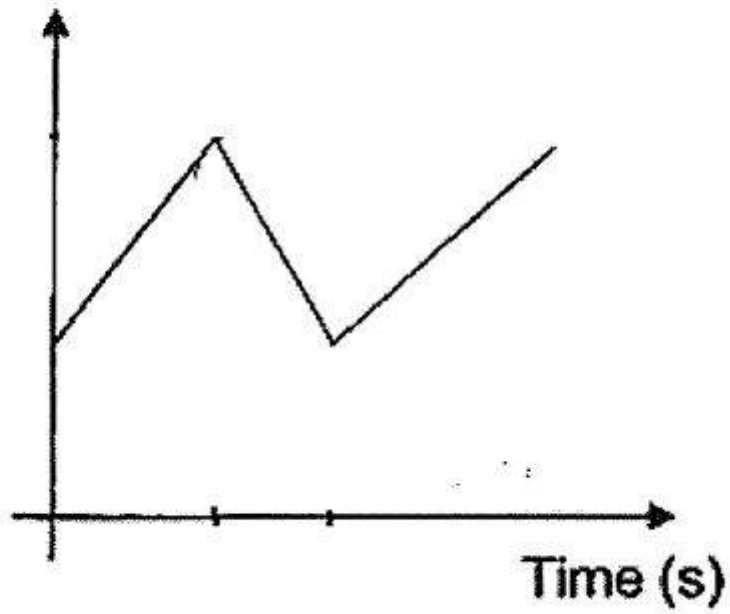
Which one of the diagrams below shows the changes in the length of the boy's shadow over the period of time?

 A)

Length of shadow (cm)

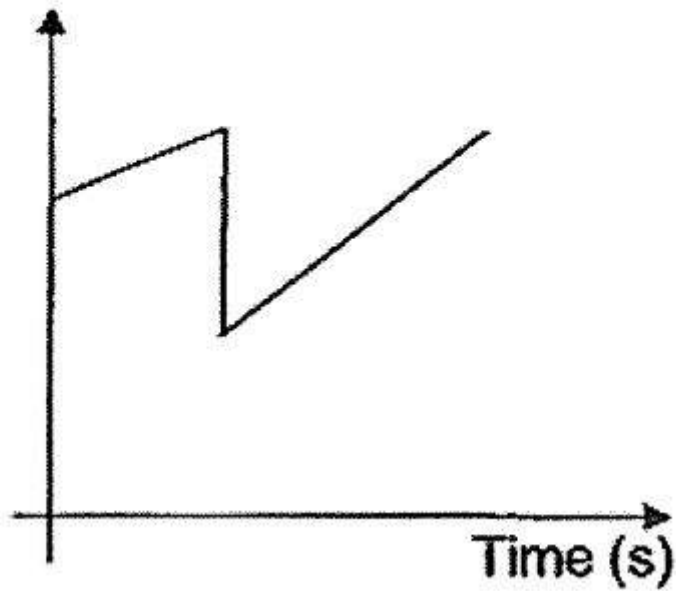
 B)

Length of shadow (cm)



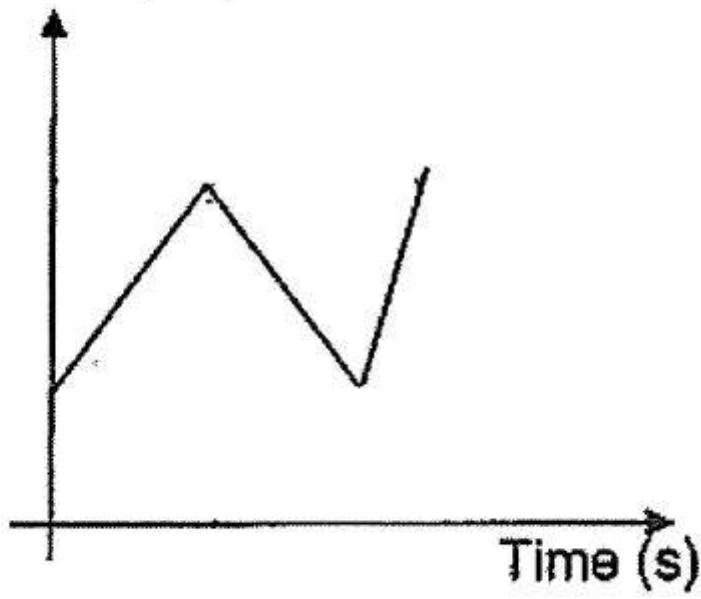
C)

Length of shadow (cm)



D)

Length of shadow (cm)



Question 25 of 64

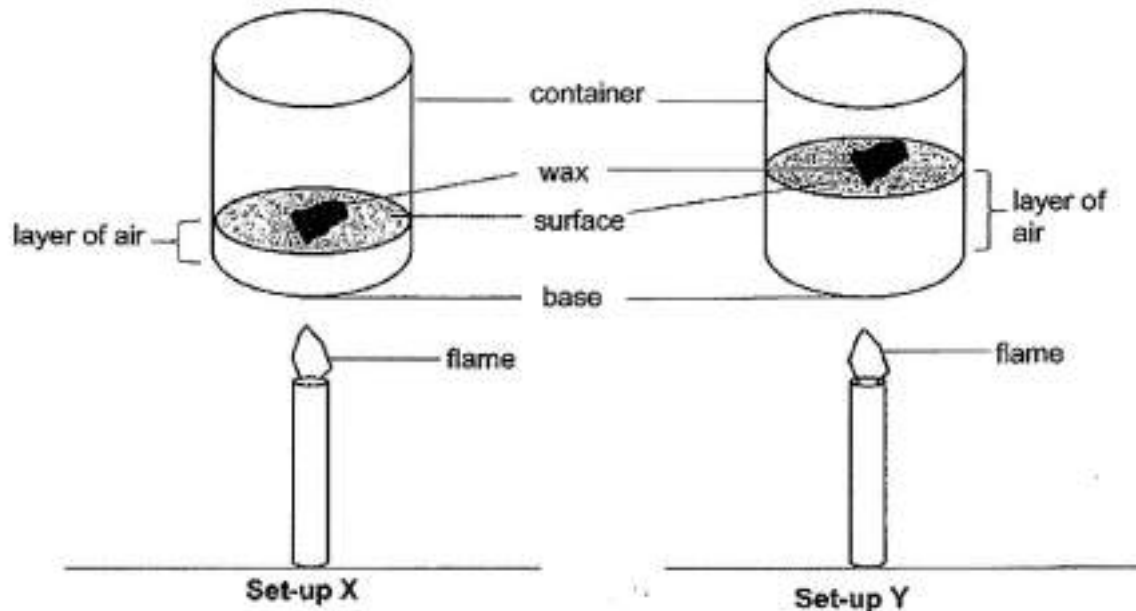
Primary 6 Science (Prelim)

2 pts

Emma carried out an experiment with the two set-ups X and Y as shown below. She used identical containers and burners for the two set-ups.

In set-up X, she placed a blob of wax on a surface which was placed 5cm above the base of the container.

In set-up Y, she placed the same amount of wax on an identical surface. The surface was raised 15 cm above the base of the container as shown below.



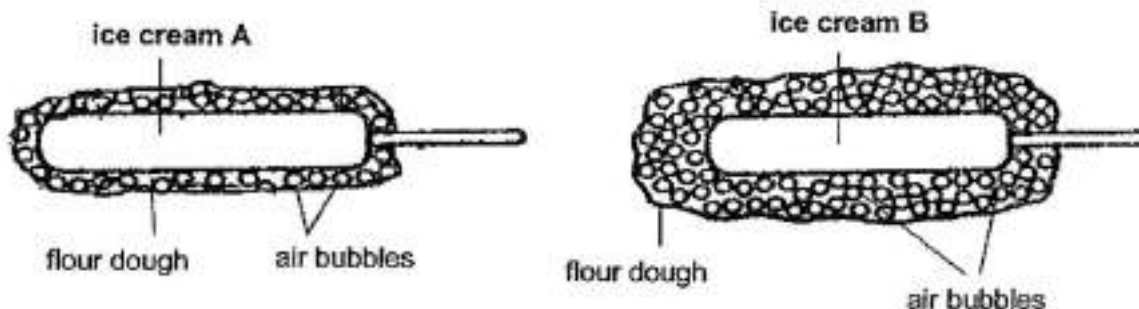
She recorded her observation in the table below.

| Layer of air between wax and base of container (cm) | Time taken for wax to melt (s) |
|---|--------------------------------|
| 5 | 20 |
| 15 | 85 |

Based on the results of the experiment, Emma attempted to prepare fried ice cream. It is a dessert where coated ice cream is quickly deep fried to create a golden and crispy shell around the still cold ice cream.

She prepared the flour dough using a mixture of water, baking soda and flour. She coated the identical ice creams with different amounts of flour dough as shown below.

Then they were deep fried using the same amount of heat for ten seconds until golden brown.



Emma observed that one of the ice creams melted after ten seconds.
Which one of the following is correct?

- A)

| Ice cream that melted | Reason |
|-----------------------|--|
| A | The flour dough is a good conductor of heat. |
- B)

| Ice cream that melted | Reason |
|-----------------------|--|
| A | There was less air in the dough. Thus, the ice cream gained heat faster. |
- C)

| Ice cream that melted | Reason |
|-----------------------|---|
| B | The air in the air bubbles is a poor conductor of heat. |
- D)

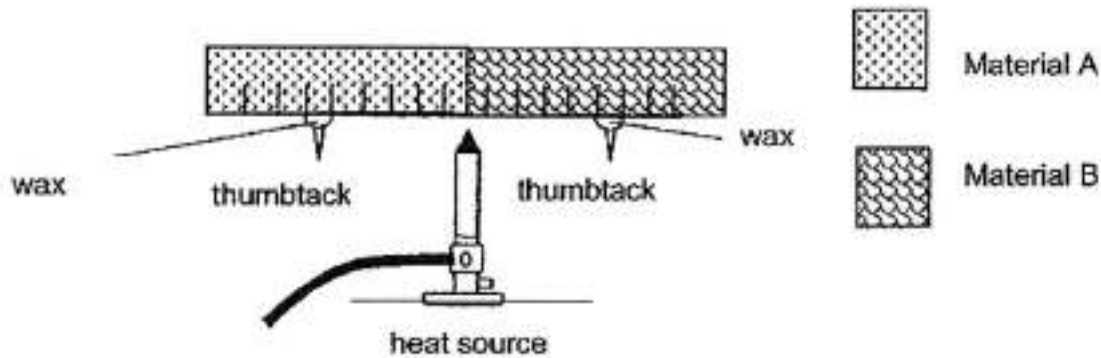
| Ice cream that melted | Reason |
|-----------------------|---|
| B | The flour dough has more air bubbles round the ice cream. |

Question 26 of 64

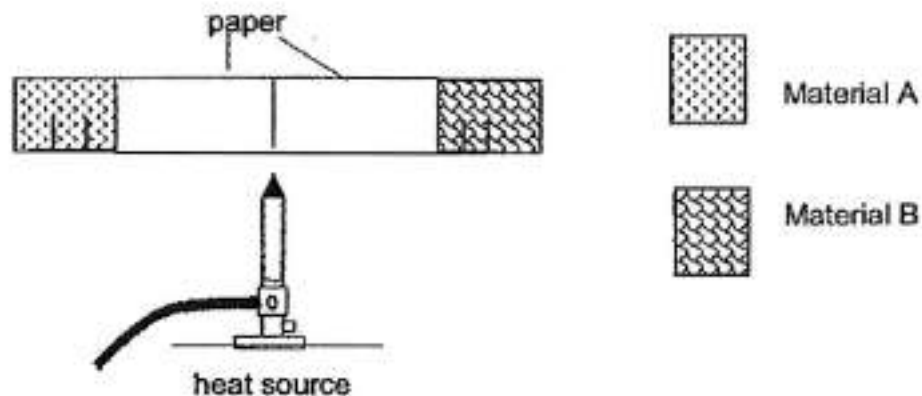
Primary 6 Science (Prelim)

2 pts

Alison prepared the set-up shown below using the same amount of wax to hold the identical thumbtacks on the materials A and B respectively. The materials are of identical length. The thumbtacks were placed at equal distance away from the heat source. Alison observed the thumbtack on material B drop off first.



Next, she wrapped a piece of paper round materials A and B as shown below and put over a heat source. She observed the piece of paper after three minutes.



Which of the following provides the correct observation and explanation?

- A)
- | Observation | Explanation |
|-------------------------------------|--|
| The paper on material A would burn. | Material A conducted heat to the paper more quickly. |
- B)
- | Observation | Explanation |
|-------------------------------------|--|
| The paper on material A would burn. | Material A conducted heat away from the paper more slowly. |
- C)
- | Observation | Explanation |
|-------------------------------------|--|
| The paper on material B would burn. | Material B conducted heat to the paper more quickly. |
- D)
- | Observation | Explanation |
|-------------|-------------|
| | |

The paper on material B would burn.

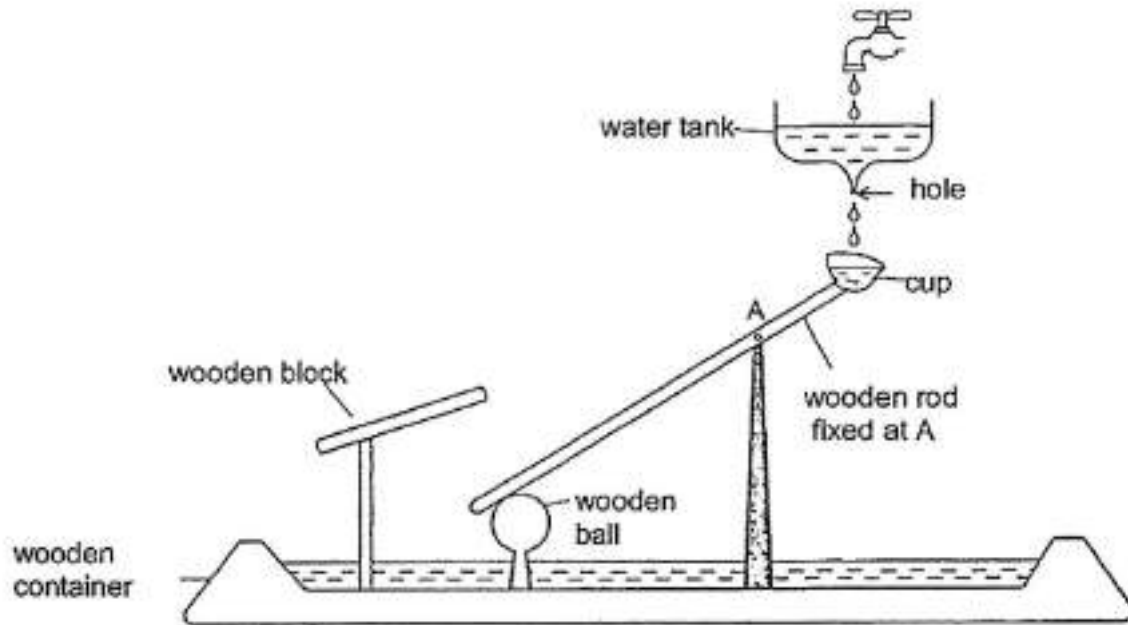
Material B conducted heat away from the paper more slowly.

Question 27 of 64

Primary 6 Science (Prelim)

2 pts

Linda designed a model as shown below.



The cup is fixed onto a wooden rod which can move at pivot A. Water from a tank is dripped into the cup. When the cup is filled up with water, it moved down, causing the other end of the rod to hit against the wooden block.

Which of the following should Linda change to enable her model to produce a louder sound?

- A increase the size of the hole
- B increase the size of the wooden ball
- C change the wooden ball to a metal ball
- D increase the height of the tank above the wooden container

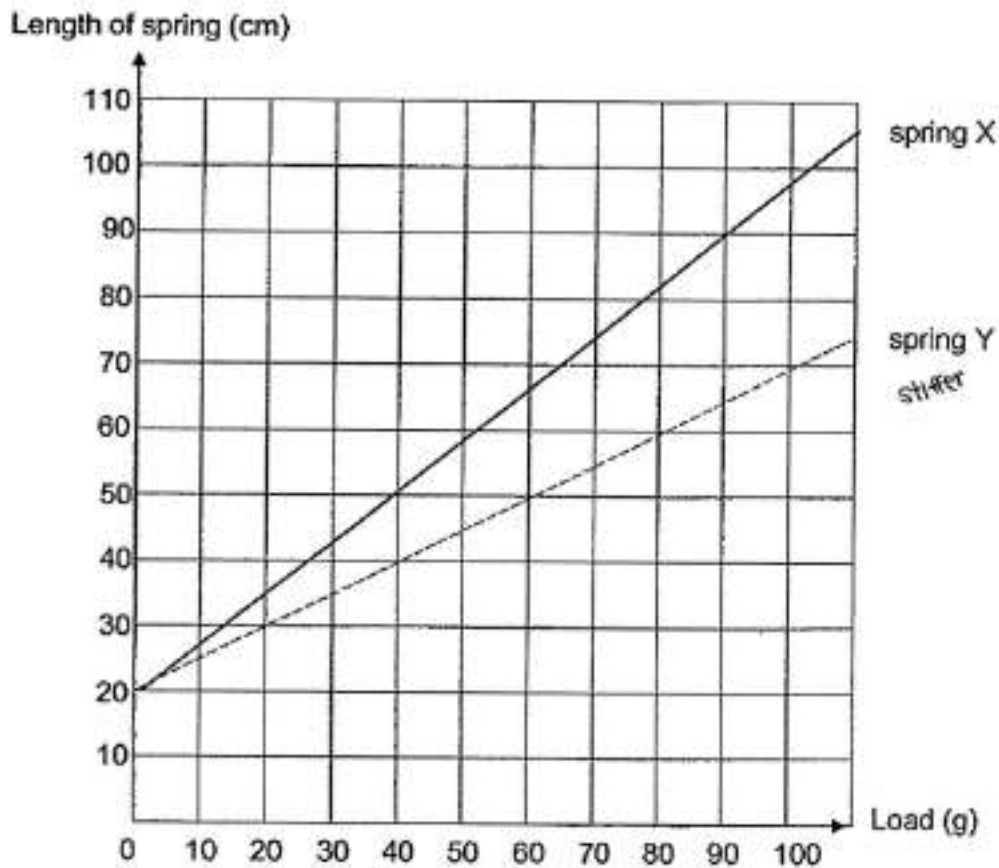
- A) A only
- B) C and D only
- C) A and D only
- D) A, B and C only

Question 28 of 64

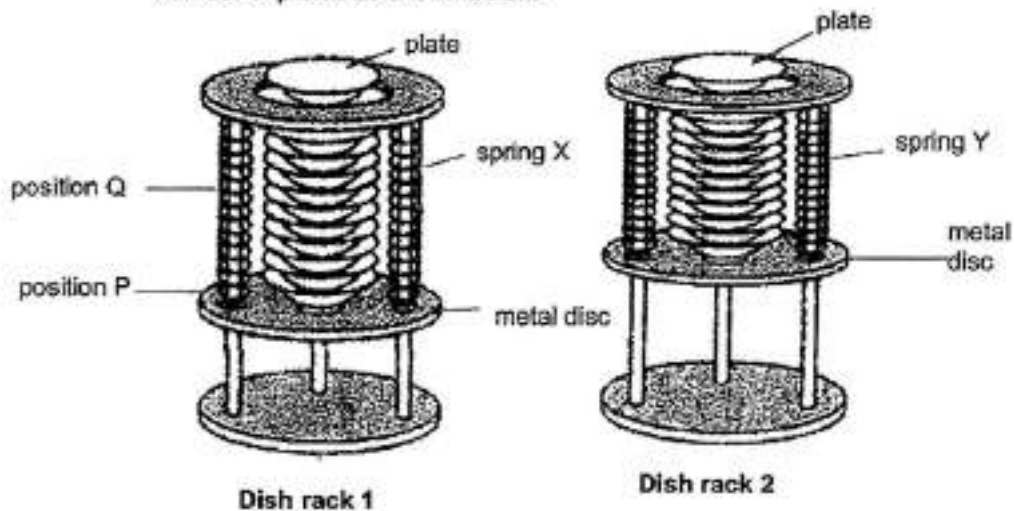
Primary 6 Science (Prelim)

2 pts

Trina conducted an experiment using springs X and Y. She hung different numbers of weights one at a time and recorded the length of the springs. Her results were shown in the graph below.



The two springs, X and Y, were used to make the two dish racks, which hold identical number of plates as shown below.



When Trina removed three plates from the top of dish rack 1, the metal disc moved up from P to Q. She also removed three plates from dish rack 2.

Based on the graph and the information provided, which of the following statement(s) is / are true when three plates were removed from the two dish racks?

- A The metal discs on both racks have gravitational potential energy and elastic potential energy.
- B The metal disc on dish rack 1 will have less gravitational potential energy than the metal disc in dish rack 2.

- C** The metal discs for both racks moved up because the stretched springs exerted a pulling force on the metal discs.
- D** The metal disc moved up as the weight of the plates is greater than the elastic spring force acting on the metal discs.
-

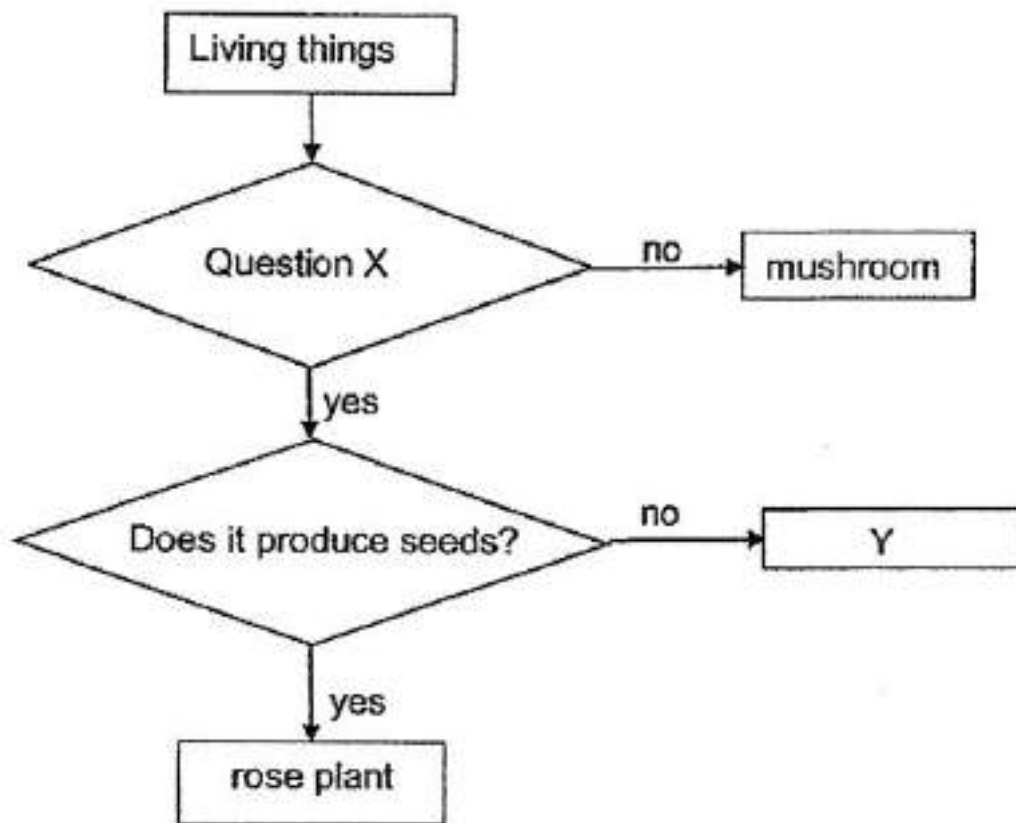
- A)** A and B only
- B)** A and C only
- C)** B and C only
- D)** B and D only

Question 29 of 64

Primary 6 Science (Prelim)

0 pts

Study the chart below.



Based on the chart above, fill in the blank with the correct answers.

Question X: _____ (0.5 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.

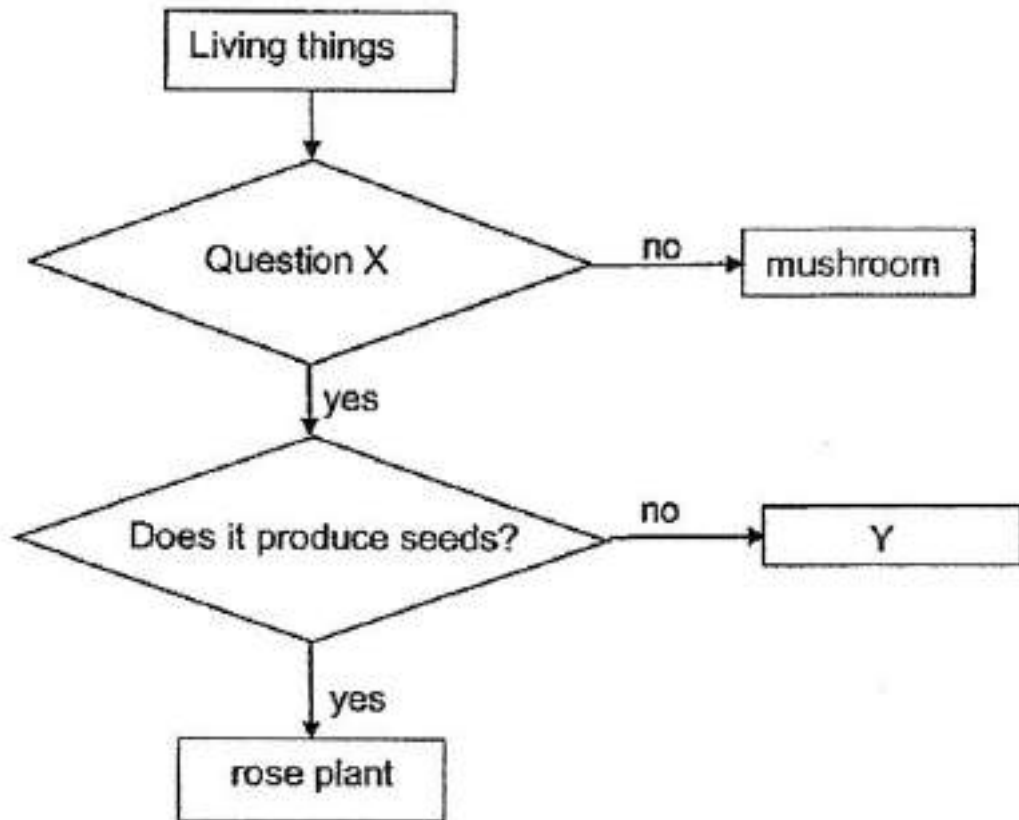
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 30 of 64

Primary 6 Science (Prelim)

0.5 pts

Study the chart below.



Based on the chart above, fill in the blank with the correct answer.

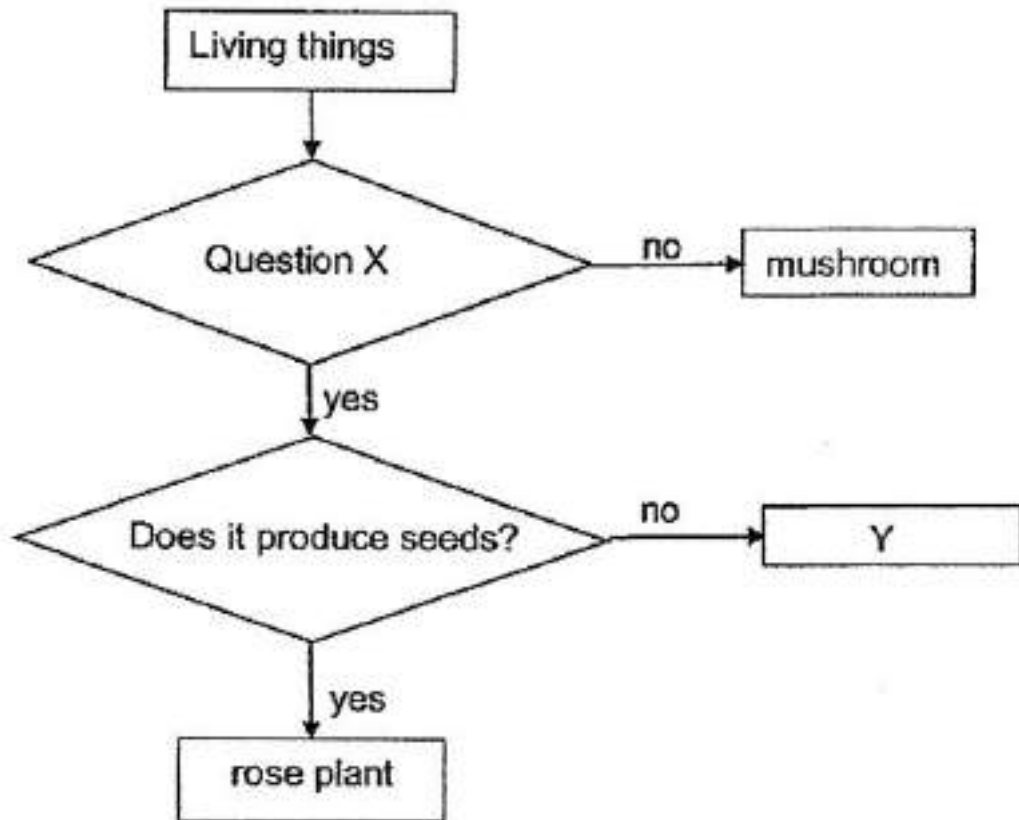
Question Y: _____

Question 31 of 64

Primary 6 Science (Prelim)

1 pt

Study the chart below.



How does organism Y reproduce?

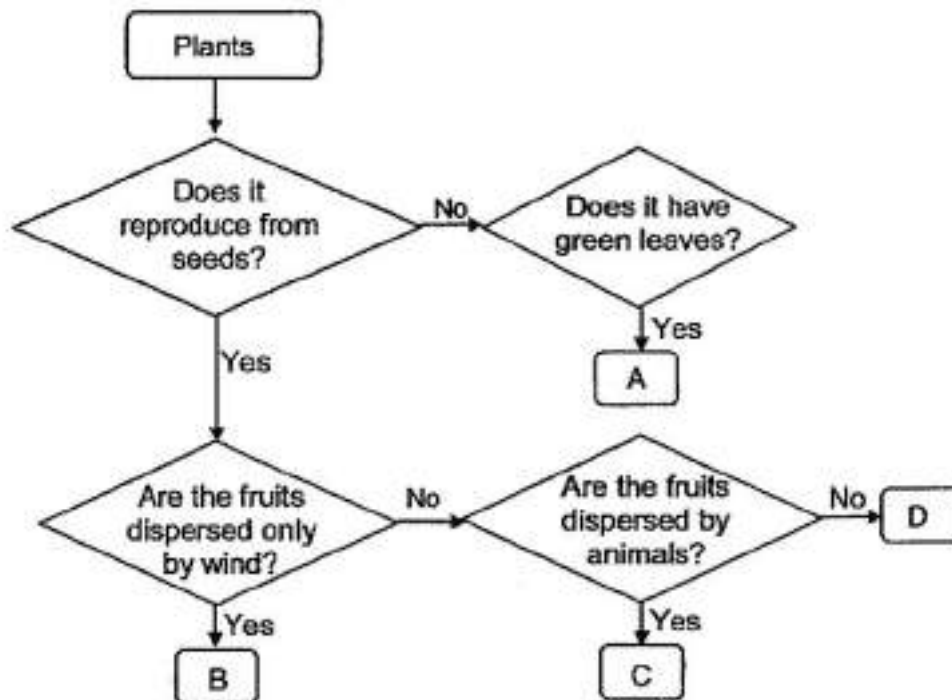
Question 32 of 64

Primary 6 Science (Prelim) 0 pts

The diagram shows the characteristics of three fruits, P, Q and R, found in a park. A tick (✓) shows the presence of the characteristic of the fruits.

| Fruit | Characteristic of fruit | | |
|-------|-------------------------|---------------------|--------------------|
| | Edible juicy flesh | Wing-like structure | Pod-like structure |
| P | ✓ | | |
| Q | | ✓ | |
| R | | | ✓ |

Study the chart below.



Based on the information from the chart above, state one similarity between Plant B and Plant D. (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 33 of 64

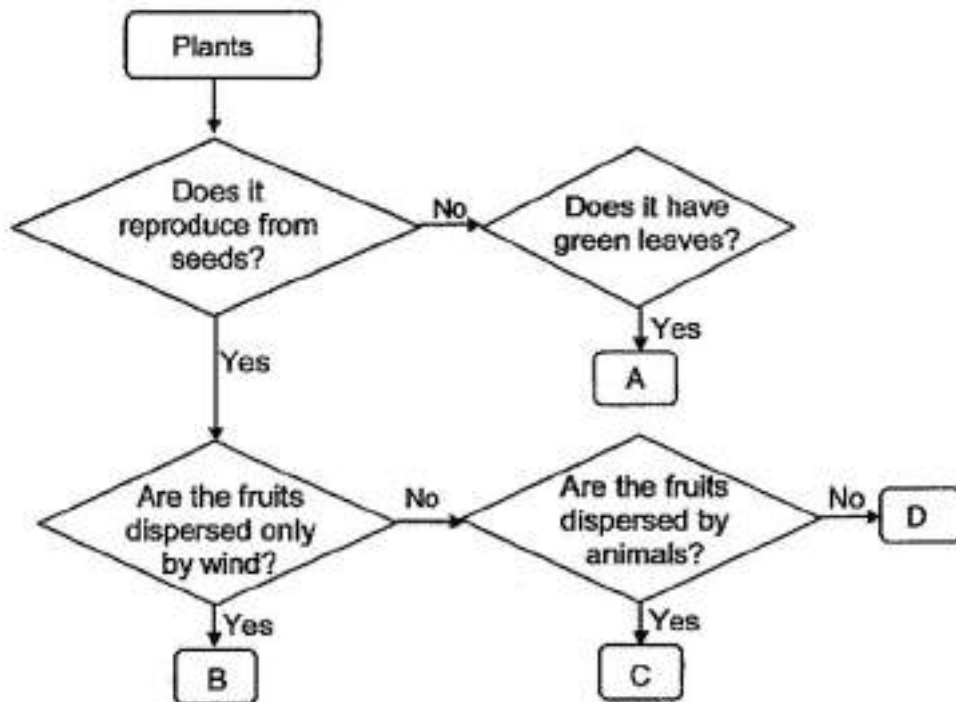
Primary 6 Science (Prelim)

1 pt

The diagram shows the characteristics of three fruits, P, Q and R, found in a park. A tick (✓) shows the presence of the characteristic of the fruits.

| Fruit | Characteristic of fruit | | |
|-------|-------------------------|---------------------|--------------------|
| | Edible juicy flesh | Wing-like structure | Pod-like structure |
| P | ✓ | | |
| Q | | ✓ | |
| R | | | ✓ |

Study the chart below.



Based on the information from the table and the chart on the previous page, which plants, A, B, C and D, in the chart best represents plants that bear fruits P, Q and R?

-
1. [] Fruit P: Plant _____ A. C
-
2. [] Fruit Q: Plant _____ B. B
-
3. [] Fruit R: Plant _____ C. D
-

Question 34 of 64

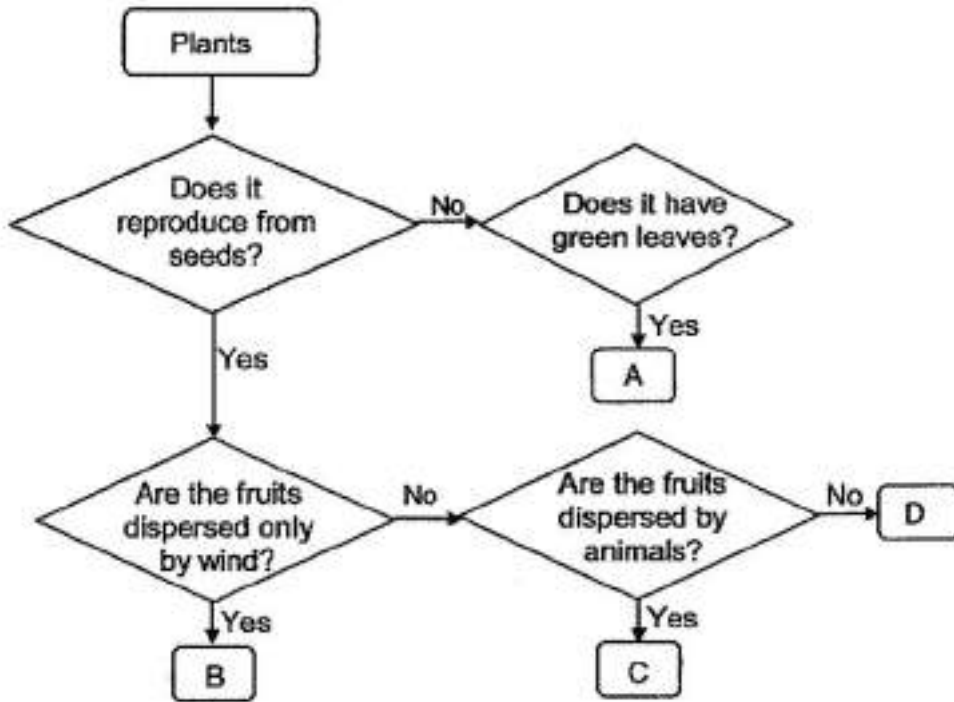
Primary 6 Science (Prelim)

2 pts

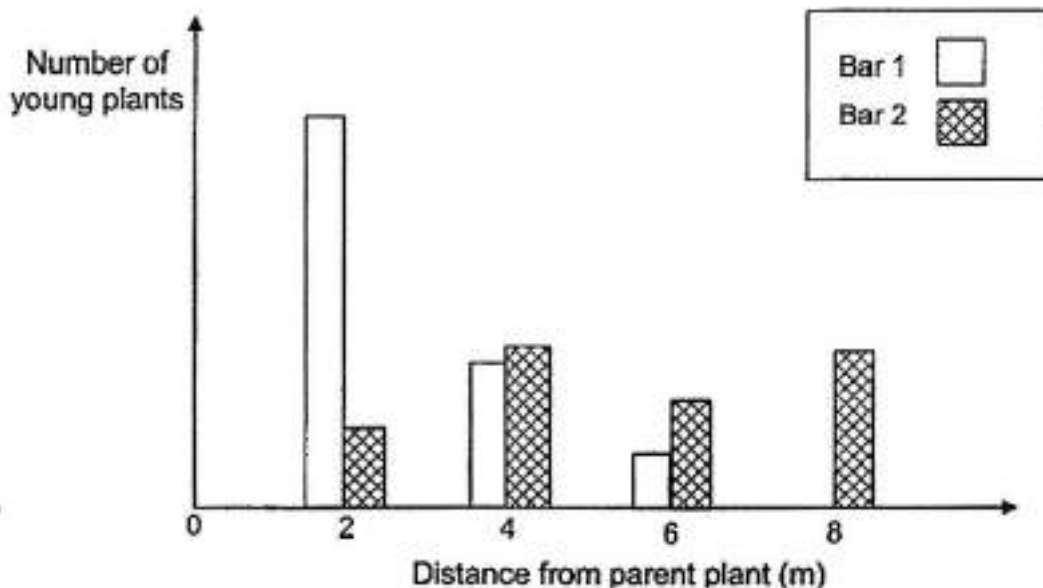
The diagram shows the characteristics of three fruits, P, Q and R, found in a park. A tick (✓) shows the presence of the characteristic of the fruits.

| Fruit | Characteristic of fruit | | |
|-------|-------------------------|---------------------|--------------------|
| | Edible juicy flesh | Wing-like structure | Pod-like structure |
| P | ✓ | | |
| Q | | ✓ | |
| R | | | ✓ |

Study the chart below.



The number of young plants that bear fruits P and R were found at various distances from their parent plants as shown in the graph below.



Based on the information above, which bar, 1 or 2, represents the results

recorded for plants of fruit P. Explain your answer.

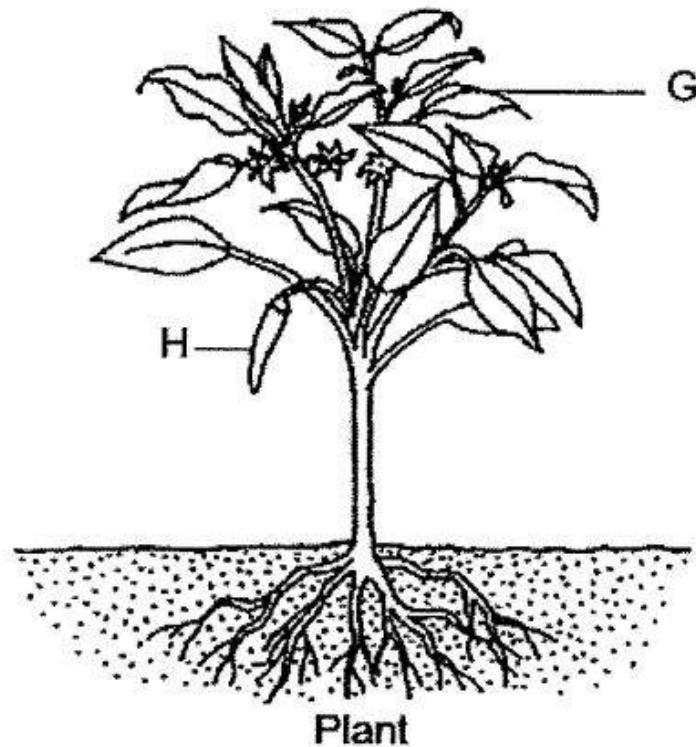
[2]

Question 35 of 64

Primary 6 Science (Prelim)

0 pts

The diagram below shows a plant.



State the main function of part G. (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.

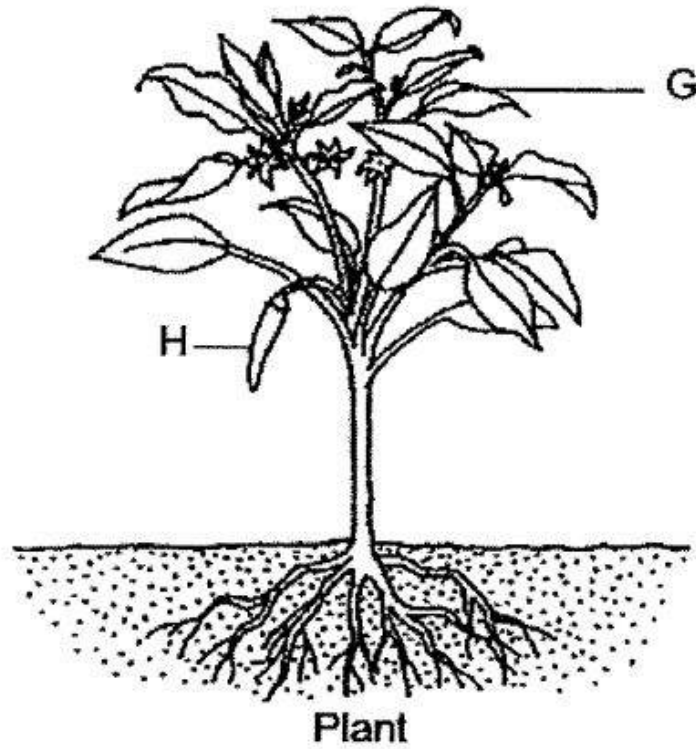
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 36 of 64

Primary 6 Science (Prelim)

1 pt

The diagram below shows a plant.



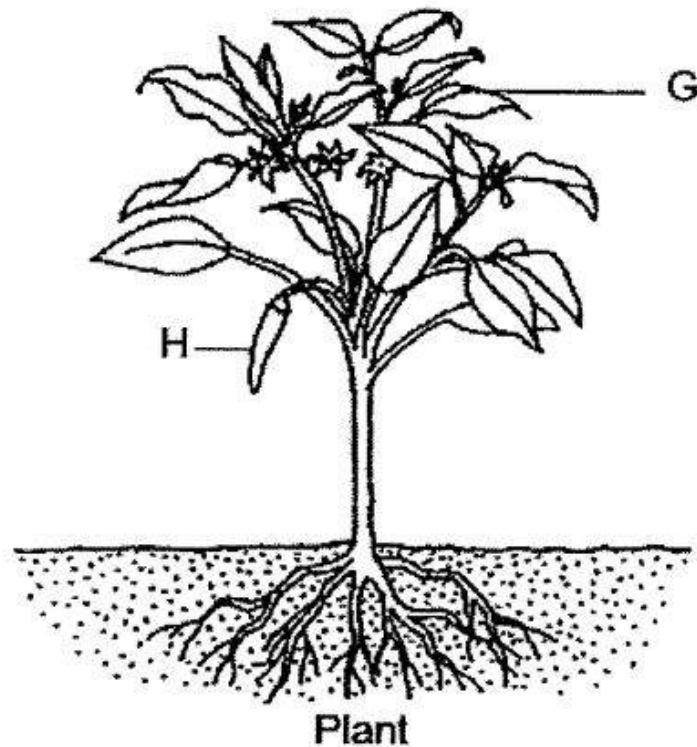
State the part of the flower that part H developed from.

Question 37 of 64

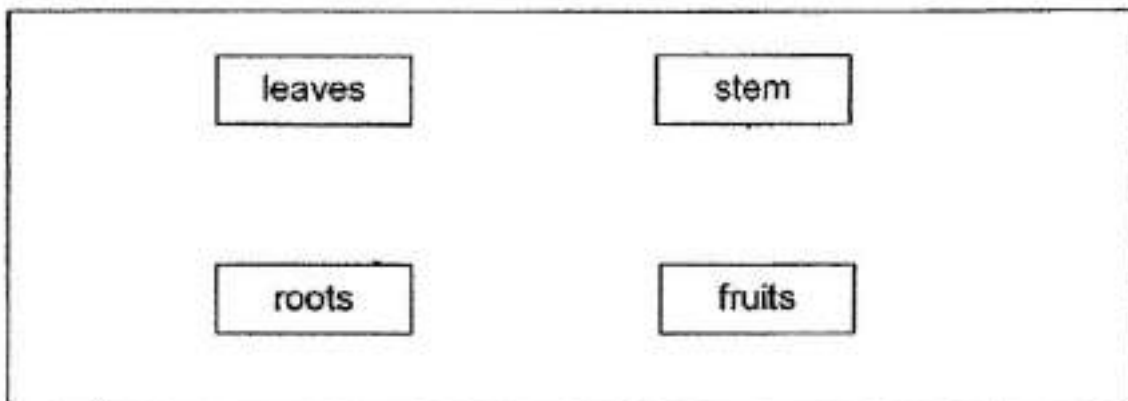
Primary 6 Science (Prelim)

0 pts

The diagram below shows a plant.



Four parts of the plant are listed below. Draw arrows (→) in the diagram below to show how food is transported in the plant. [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.

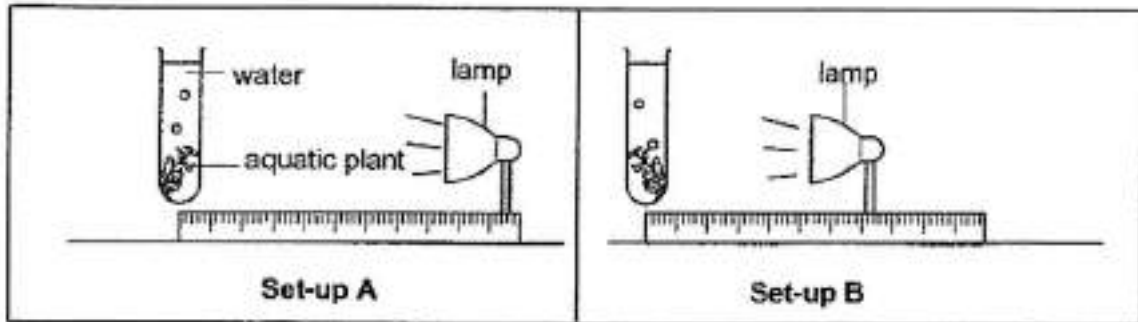
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 38 of 64

Primary 6 Science (Prelim)

0 pts

Ali wanted to find out how the distance between the lamp and the test-tube of an aquatic plant would affect the number of bubbles produced by the plant. He prepared two set-ups, A and B, as shown below.



He counted the number of bubbles produced per minute for both set-ups. His results are as shown.

| Set-up | Number of bubbles produced per minute |
|--------|---------------------------------------|
| A | 17 |
| B | 33 |

Based on Ali's results, explain how the distance between the lamp and the test-tube of the aquatic plant affect the rate of photosynthesis. (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.

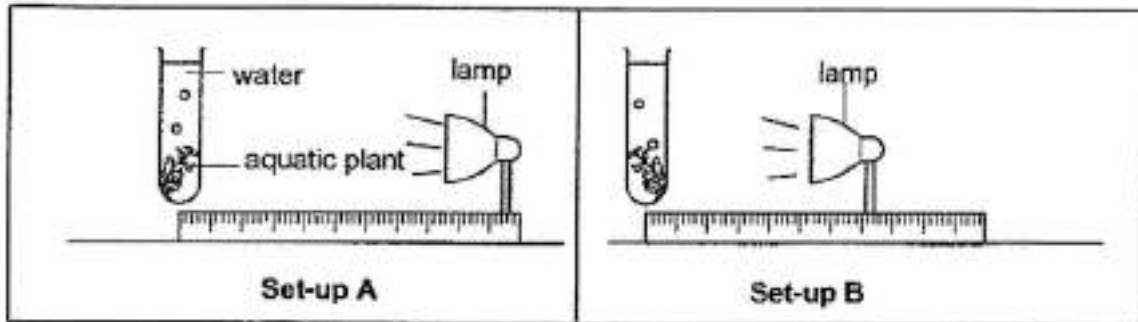
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 39 of 64

Primary 6 Science (Prelim)

0 pts

Ali wanted to find out how the distance between the lamp and the test-tube of an aquatic plant would affect the number of bubbles produced by the plant. He prepared two set-ups, A and B, as shown below.



He counted the number of bubbles produced per minute for both set-ups. His results are as shown.

| Set-up | Number of bubbles produced per minute |
|--------|---------------------------------------|
| A | 17 |
| B | 33 |

State two variables that Ali has to keep constant when conducting his 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.

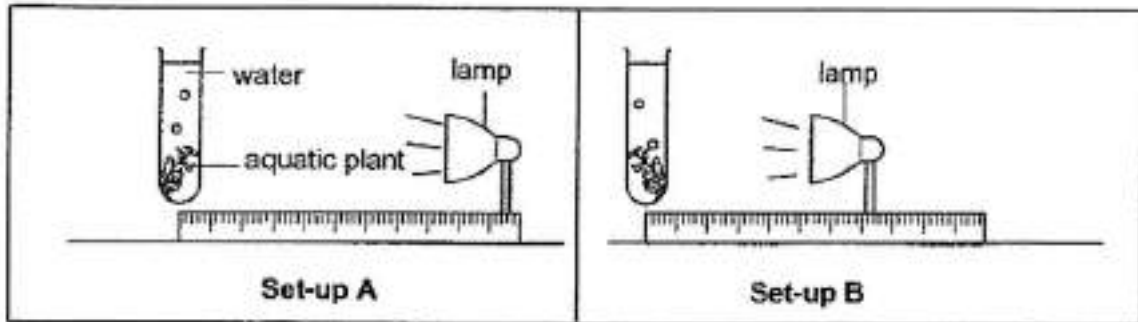
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 40 of 64

Primary 6 Science (Prelim)

0 pts

Ali wanted to find out how the distance between the lamp and the test-tube of an aquatic plant would affect the number of bubbles produced by the plant. He prepared two set-ups, A and B, as shown below.



He counted the number of bubbles produced per minute for both set-ups. His results are as shown.

| Set-up | Number of bubbles produced per minute |
|--------|---------------------------------------|
| A | 17 |
| B | 33 |

Ali recorded the initial mass of the aquatic plants before the experiment and the final mass of the aquatic plants in each set-up after three days. Both lamps were switched on continuously for three days. Which plant would have a greater increase in mass? 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.

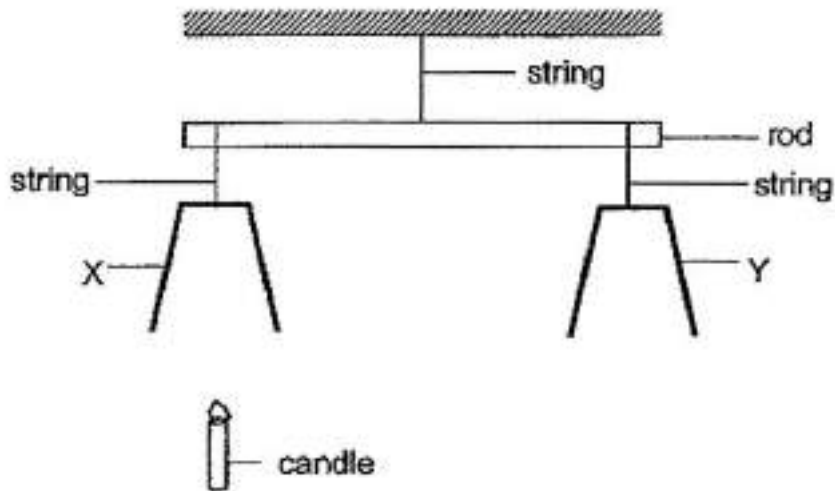
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 41 of 64

Primary 6 Science (Prelim)

0 pts

Two identical cups, X and Y, were balanced on a rod. A burning candle was placed below cup X as shown below.



Would the rod tilt downwards towards X, remain balanced or tilt downwards toward Y?
Explain your answer. (2 marks)

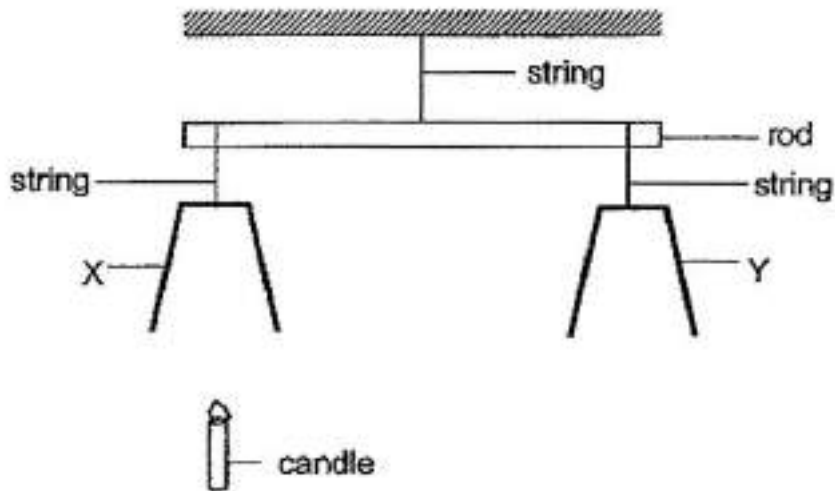
This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

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.

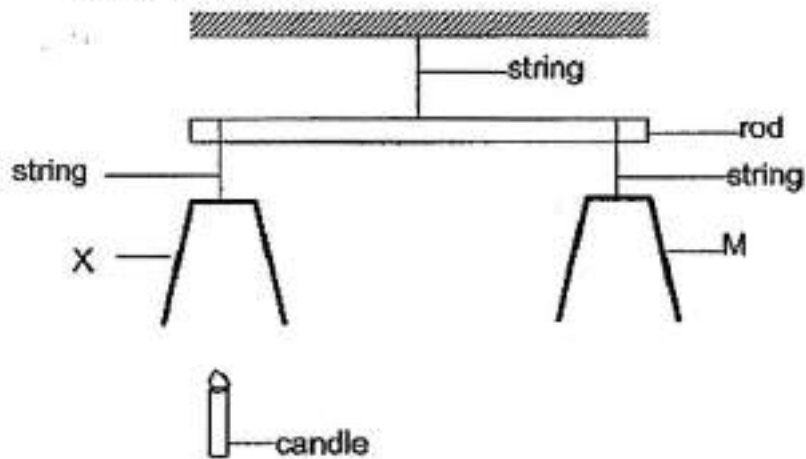
Question 42 of 64

Primary 6 Science (Prelim) 0 pts

Two identical cups, X and Y, were balanced on a rod. A burning candle was placed below cup X as shown below.



Changes were made to the set up by replacing cup Y with cup M, made of a different material.



It was observed that the rod was balanced only when the candle was placed under cup X. Explain the observation. [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.

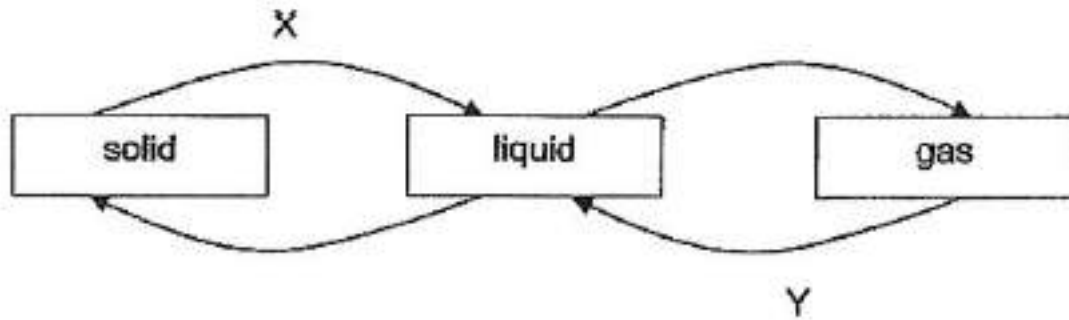
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 43 of 64

Primary 6 Science (Prelim)

0.5 pts

The diagram below shows the change of state of water.



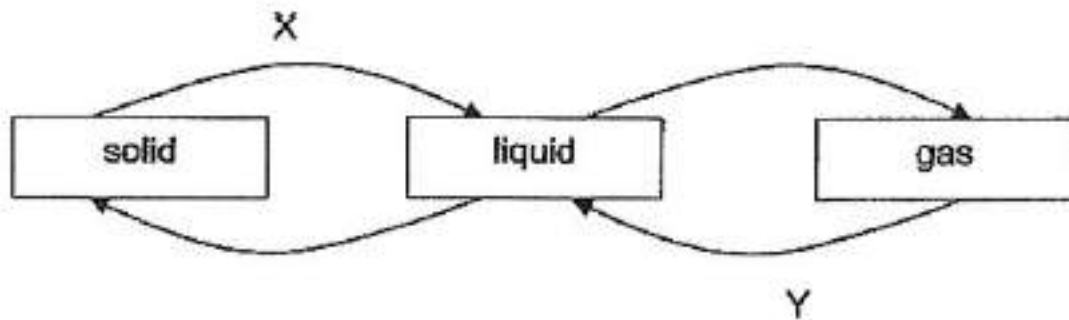
Name the process X.

Question 44 of 64

Primary 6 Science (Prelim)

0.5 pts

The diagram below shows the change of state of water.



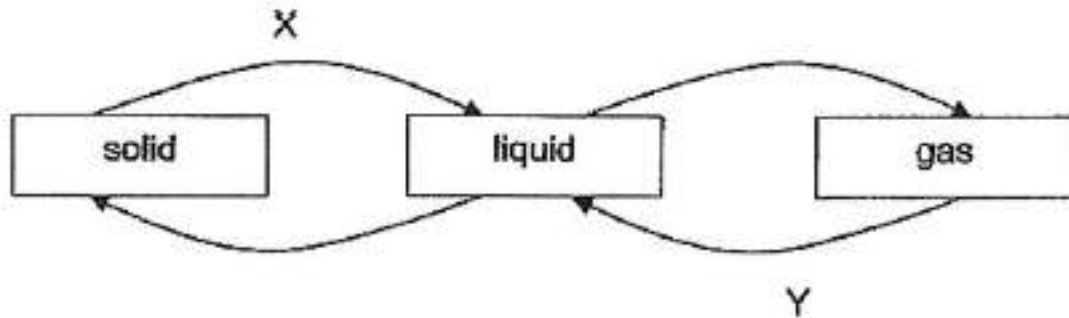
Name the process Y.

Question 45 of 64

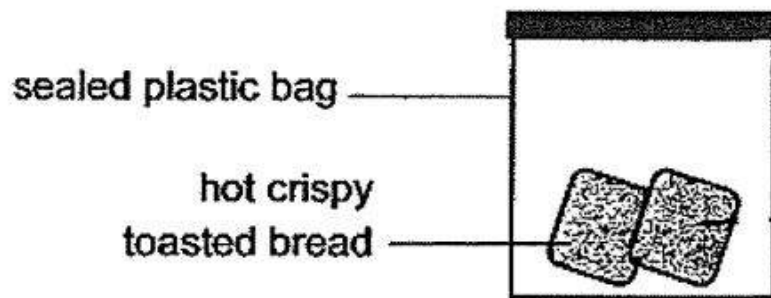
Primary 6 Science (Prelim)

0 pts

The diagram below shows the change of state of water.



Michelle bought some slices of hot crispy toasted bread for her grandfather and then walked home.



When she reached home, she found that the slices of crispy toasted bread were damp.
Explain her observation. (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.

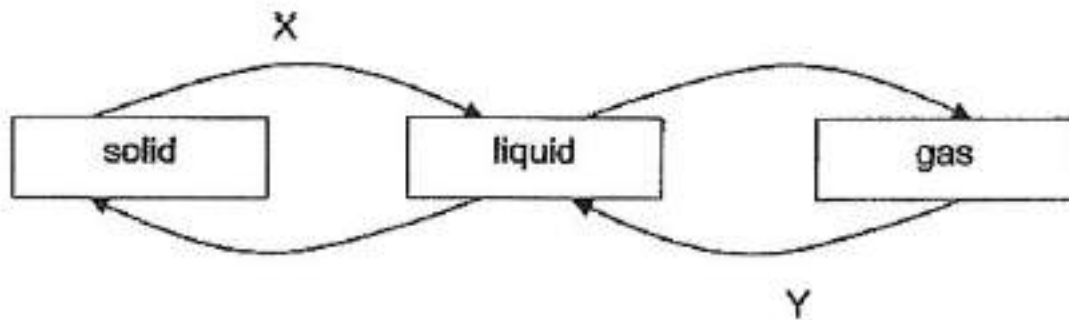
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 46 of 64

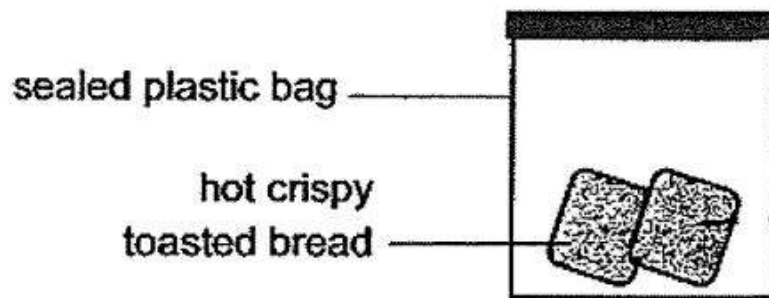
Primary 6 Science (Prelim)

0 pts

The diagram below shows the change of state of water.



Michelle bought some slices of hot crispy toasted bread for her grandfather and then walked home.



Suggest what Michelle could have done to ensure the slices of toasted bread remained crispy by the time she reached home. (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.

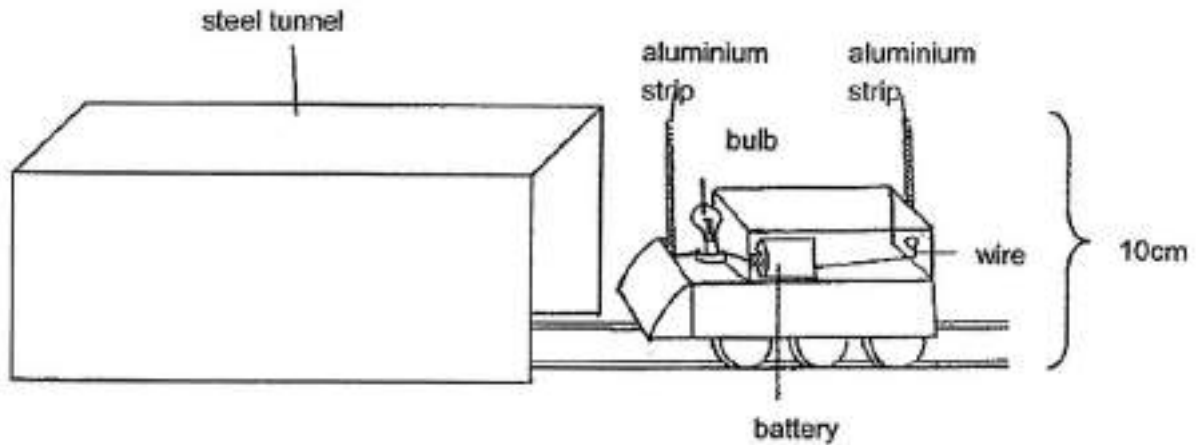
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 47 of 64

Primary 6 Science (Prelim)

0 pts

Jason made a toy train and a steel tunnel. Both had a height of 10 cm. The aluminium strips were attached to the toy train. The diagram below shows his toy train set.



Jason observed that the light bulb on the toy train only lit up when the train was moving completely under the steel tunnel.

Explain why the bulb on the toy train only lit up when it was moving completely in the steel tunnel. (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.

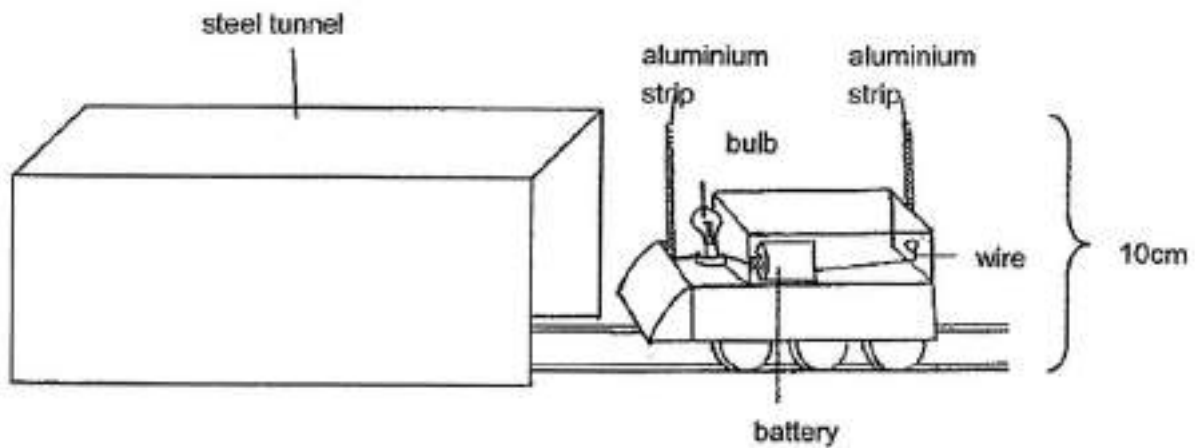
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 48 of 64

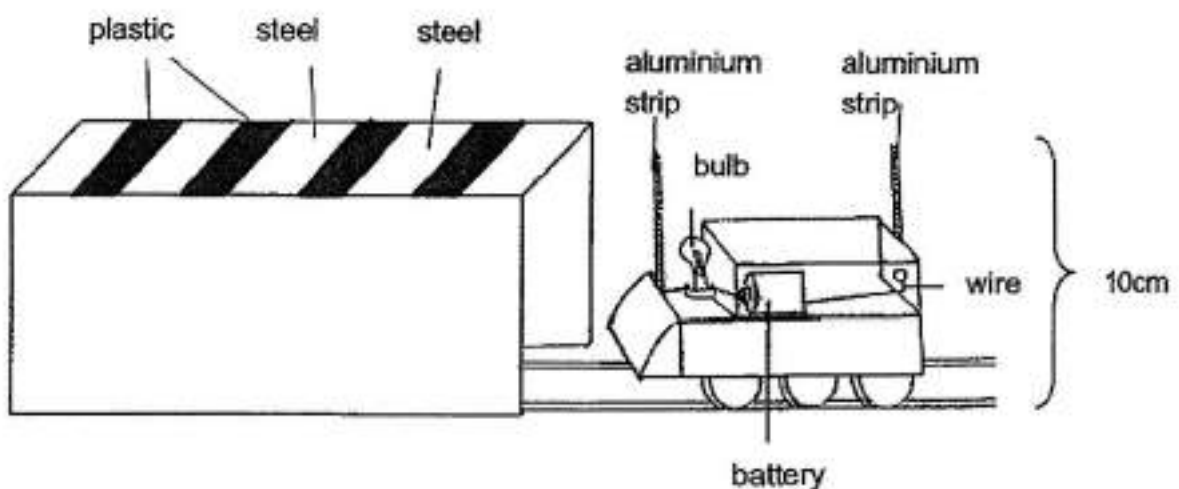
Primary 6 Science (Prelim)

0 pts

Jason made a toy train and a steel tunnel. Both had a height of 10 cm. The aluminium strips were attached to the toy train. The diagram below shows his toy train set.



Jason replaced the steel tunnel with another tunnel that was made of plastic and steel as shown in the diagram below. The height of the new tunnel was also 10 cm.



Describe what Jason would observe of the bulb while the same toy train was moving through the new tunnel shown above. [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.

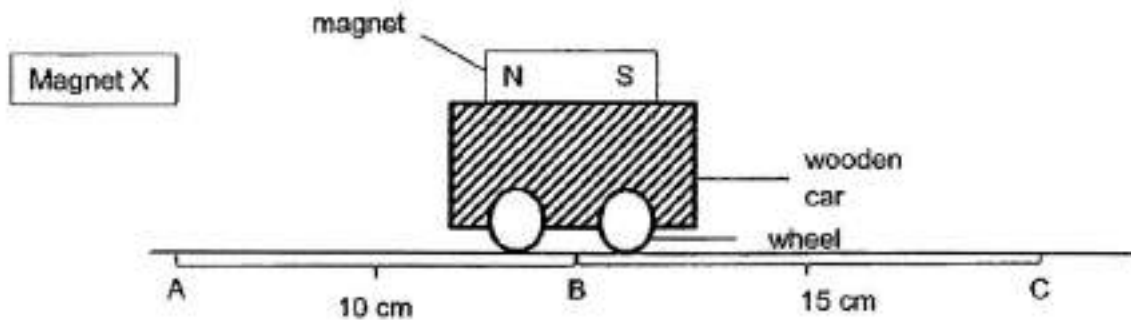
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 49 of 64

Primary 6 Science (Prelim)

0 pts

The toy car below moves along the wooden plank.



When magnet X is placed at position A, the wooden car moved from position A to B. Give a reason for his observation. (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.

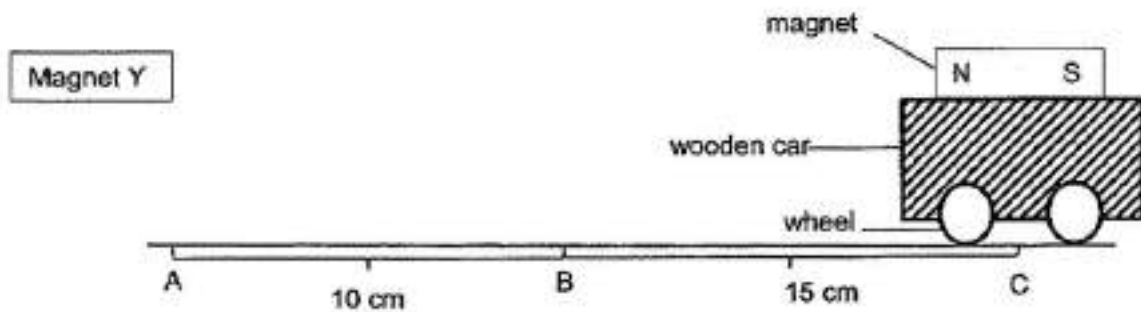
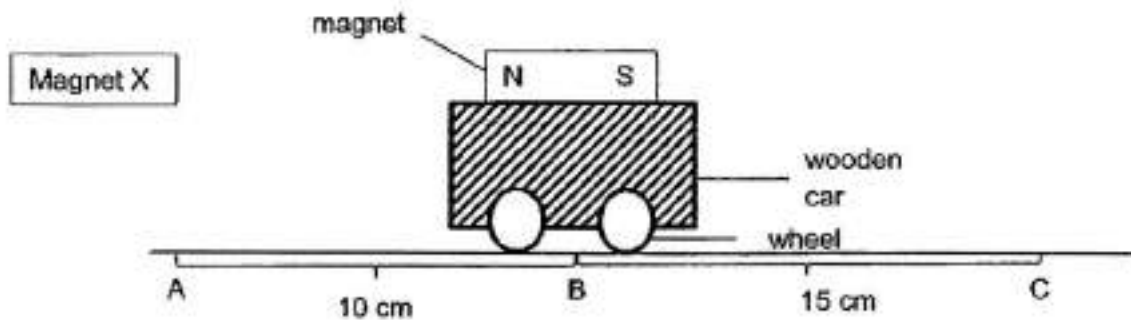
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 50 of 64

Primary 6 Science (Prelim)

0 pts

The toy car below moves along the wooden plank.



The wooden car was placed at position C. When magnet Y was placed at position A, the wooden car moved from position C to A. Based on his observations, which magnet, X or Y, is a stronger magnet. Explain your answer. [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 51 of 64

Primary 6 Science (Prelim) 0 pts

Ashlynn rubbed her eraser on a piece of paper. She saw some eraser shavings on the piece of paper.

State another observation she would made of the eraser. (1 mark)

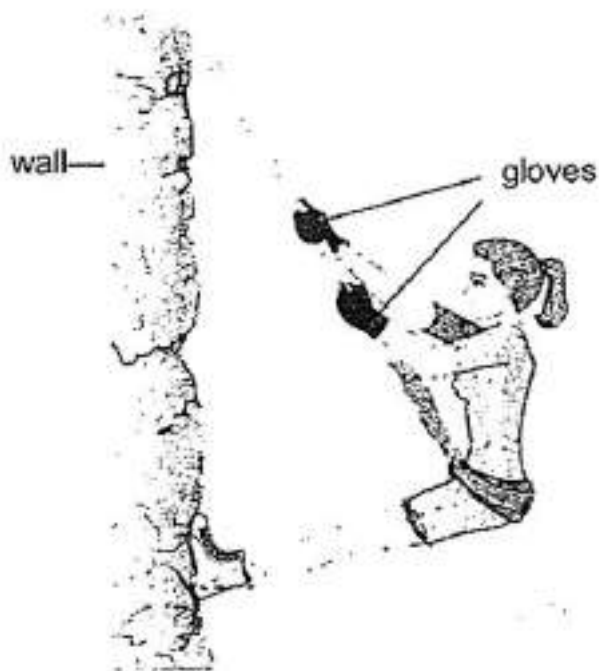
This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

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 64

Primary 6 Science (Prelim) 0 pts

The diagram below shows Ashlynn doing abseiling where she was going down a vertical wall using a rope.



Ashlynn said wearing gloves to pull on the rope while going down the wall would protect her hand. Explain why that was so. (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.

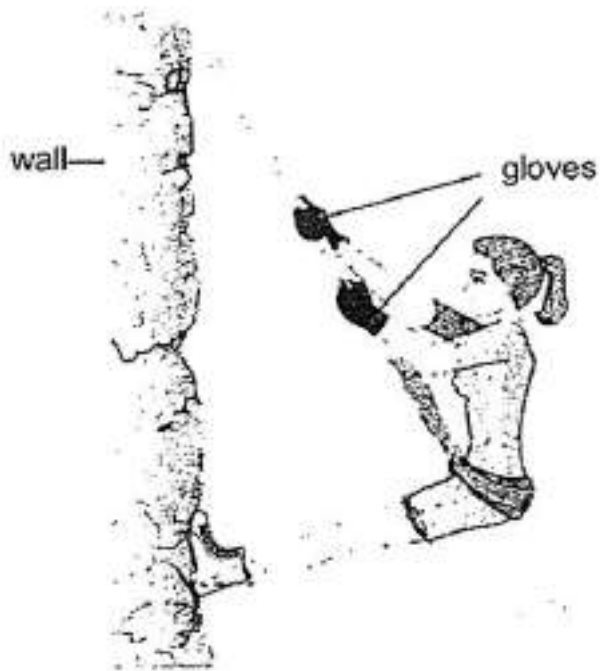
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 53 of 64

Primary 6 Science (Prelim)

1 pt

The diagram below shows Ashlynn doing abseiling where she was going down a vertical wall using a rope.



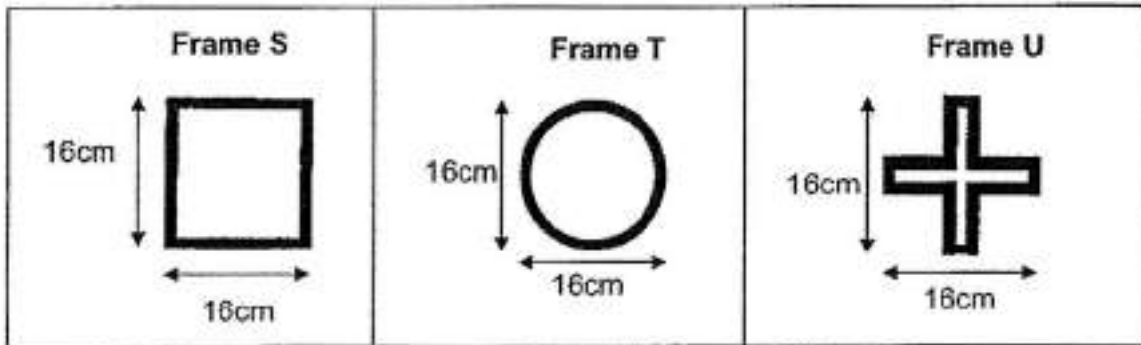
Name another force that was acting on Ashlynn.

Question 54 of 64

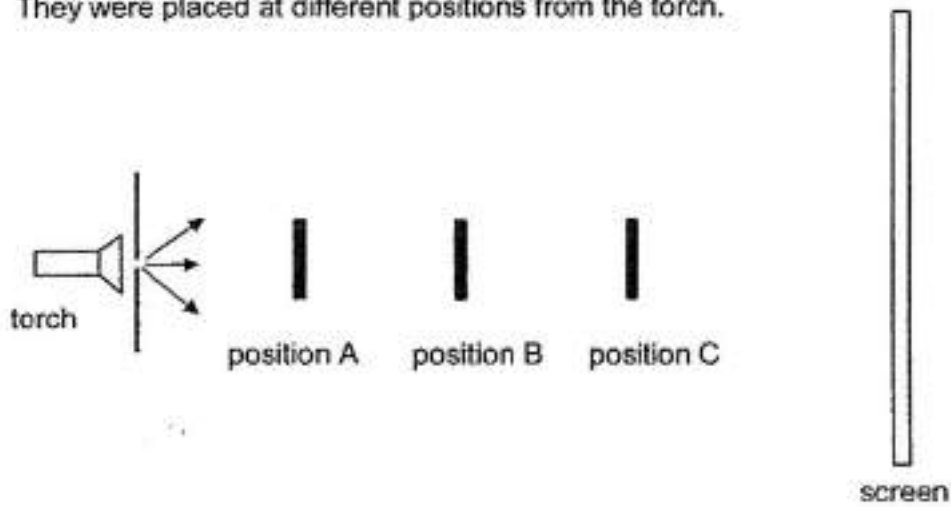
Primary 6 Science (Prelim)

1 pt

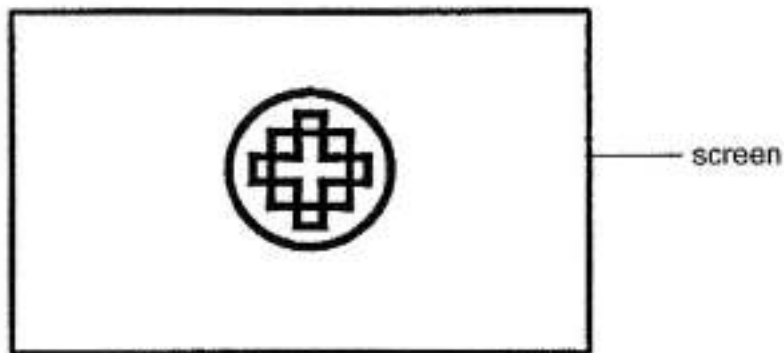
Kelvin had three wooden frames, S, T and U.



The set-up below shows light shining on the three wooden frames, S, T and U. They were placed at different positions from the torch.



The diagram below shows the shadow of the objects on the screen.



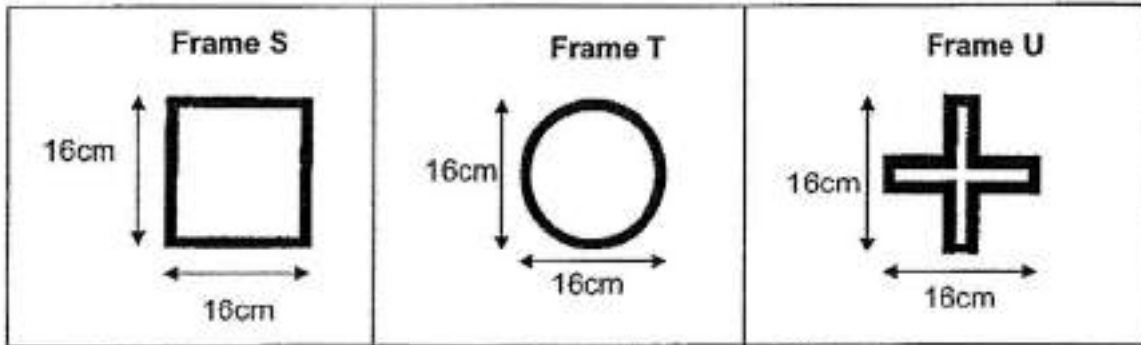
Which wooden frame, S, T or U, was at position C? (1 mark)

Question 55 of 64

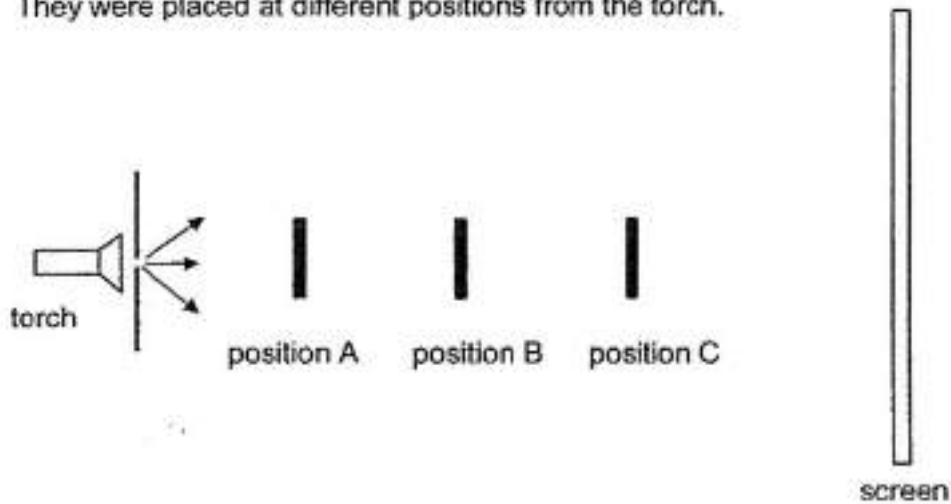
Primary 6 Science (Prelim)

0 pts

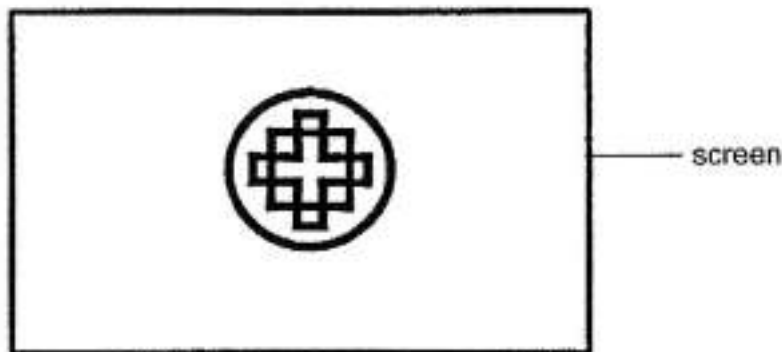
Kelvin had three wooden frames, S, T and U.



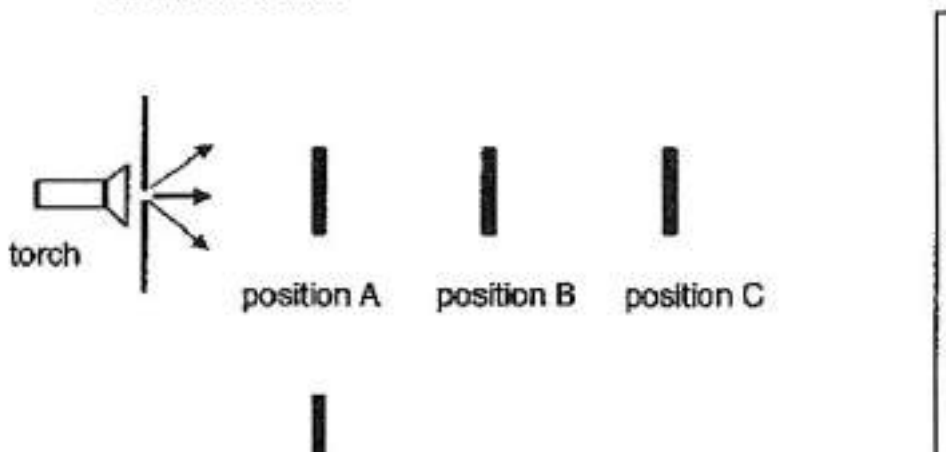
The set-up below shows light shining on the three wooden frames, S, T and U. They were placed at different positions from the torch.




The diagram below shows the shadow of the objects on the screen.



Another piece of wood measuring 16 cm x 16 cm is placed at position M as shown below.





position M



screen

Will Kelvin still be able to observe the shadow that was cast on the screen earlier? Explain 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.

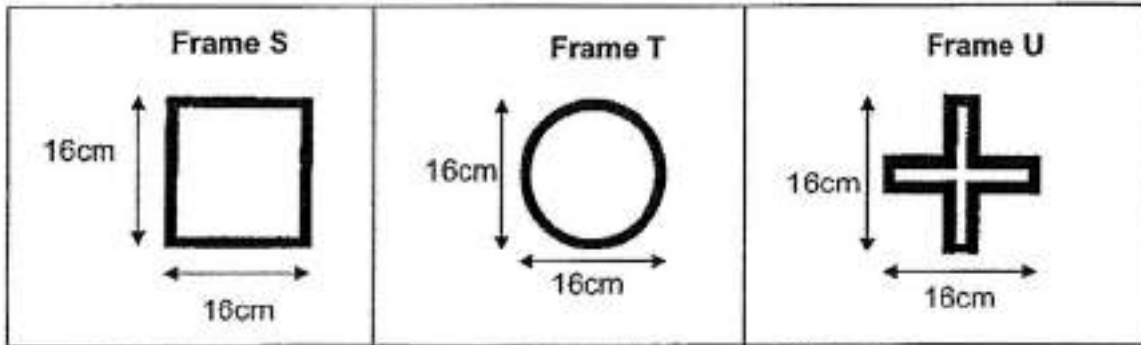
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 56 of 64

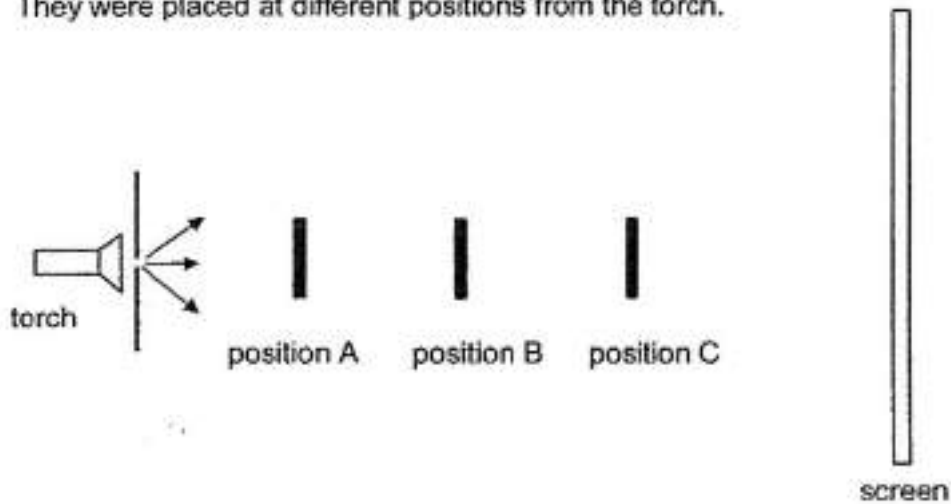
Primary 6 Science (Prelim)

1 pt

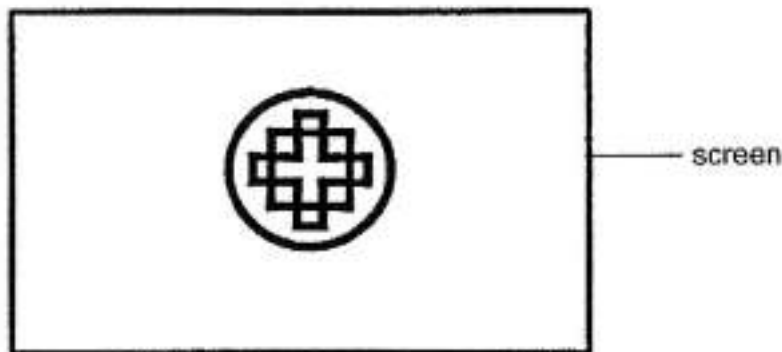
Kelvin had three wooden frames, S, T and U.



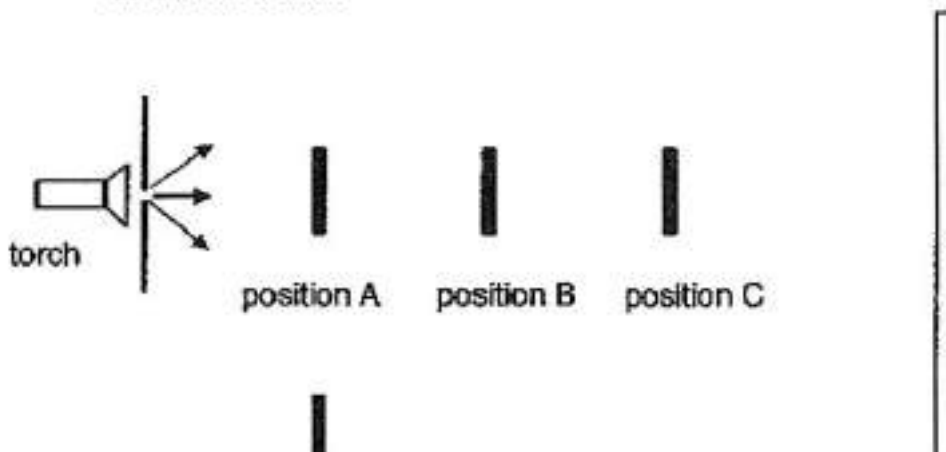
The set-up below shows light shining on the three wooden frames, S, T and U. They were placed at different positions from the torch.



The diagram below shows the shadow of the objects on the screen.



Another piece of wood measuring 16 cm x 16 cm is placed at position M as shown below.

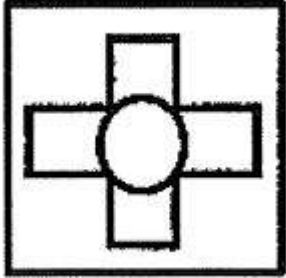


■
position M

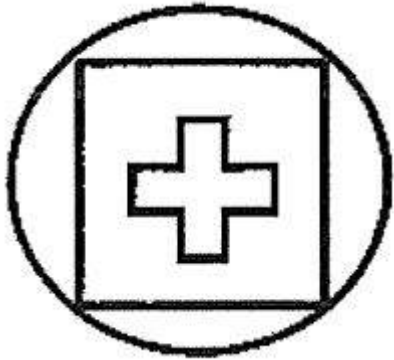
||
screen

Which of the shadows will Kelvin observe if frames S, U and T are placed at positions A, B and C respectively?

A)



B)

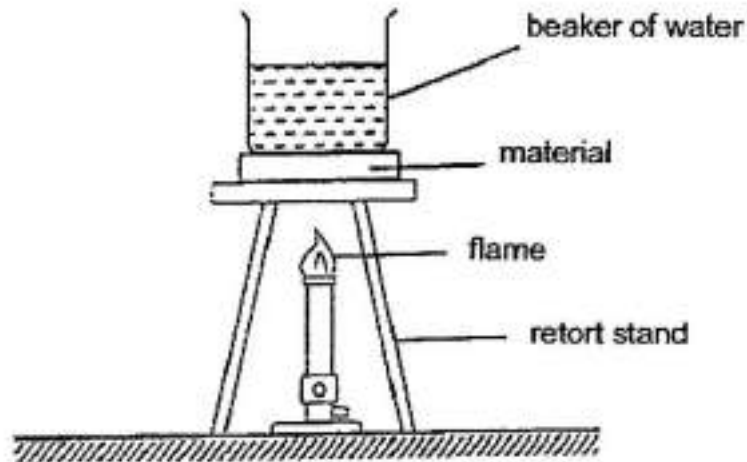


Question 57 of 64

Primary 6 Science (Prelim)

0 pts

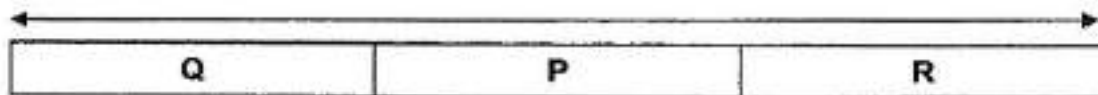
Martha used the set-up below to find out the heat conductivity of materials P, Q and R. The materials were of the same length and thickness. They were placed below a beaker of water with the same amount of heat applied to the set-ups.



The heat conductivity of materials P, Q and R is as follows.

poorest heat conductor

best heat conductor



She recorded the time taken for the water in each set up to boil in the table below.

| Materials | Time taken for water to start boiling (minutes) |
|-----------|---|
| P | 10 |
| Q | 10 |
| R | 10 |

Martha's teacher told her that her experiment was not a fair test as the time taken for water to start boiling should not be 10 minutes for all the three containers as the heat conductivity of the materials are different.

Identify one of the constant variables which was not kept the same during the experiment and describe what she could have done to arrive at the result shown in the table above. (2 marks)

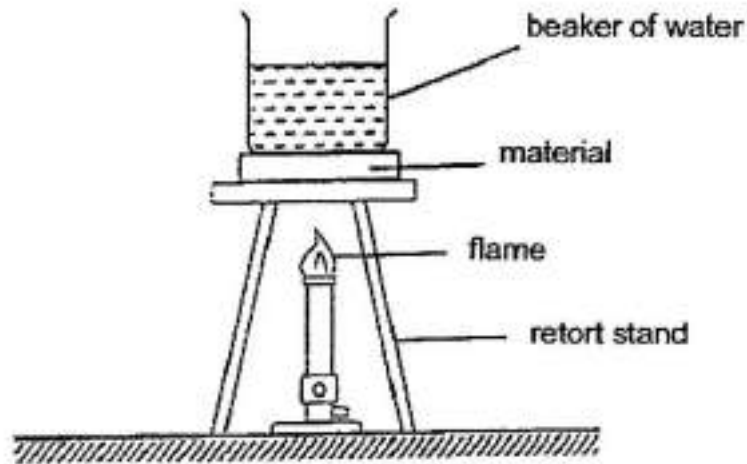
This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

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 58 of 64

Primary 6 Science (Prelim) 0.5 pts

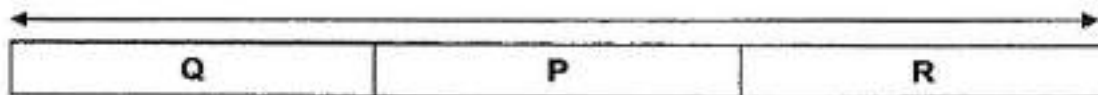
Martha used the set-up below to find out the heat conductivity of materials P, Q and R. The materials were of the same length and thickness. They were placed below a beaker of water with the same amount of heat applied to the set-ups.



The heat conductivity of materials P, Q and R is as follows.

poorest heat conductor

best heat conductor



She recorded the time taken for the water in each set up to boil in the table below.

| Materials | Time taken for water to start boiling (minutes) |
|-----------|---|
| P | 10 |
| Q | 10 |
| R | 10 |

Martha's teacher told her that her experiment was not a fair test as the time taken for water to start boiling should not be 10 minutes for all the three containers as the heat conductivity of the materials are different.

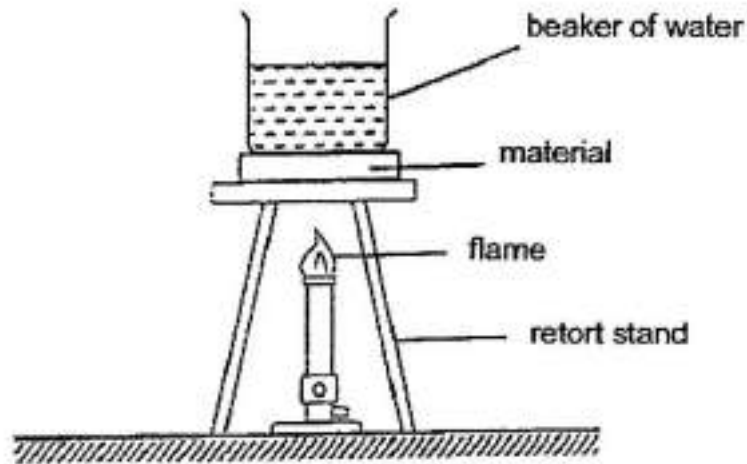
What would be the temperature of water if Martha continued to heat the beakers of boiling water for another five minutes?

| Material | Temperature of water (°C) |
|----------|---------------------------|
| P | |

Question 59 of 64

Primary 6 Science (Prelim) 0.3 pts

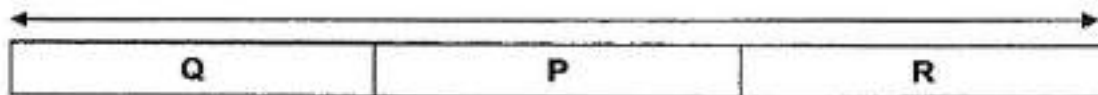
Martha used the set-up below to find out the heat conductivity of materials P, Q and R. The materials were of the same length and thickness. They were placed below a beaker of water with the same amount of heat applied to the set-ups.



The heat conductivity of materials P, Q and R is as follows.

poorest heat conductor

best heat conductor



She recorded the time taken for the water in each set up to boil in the table below.

| Materials | Time taken for water to start boiling (minutes) |
|-----------|---|
| P | 10 |
| Q | 10 |
| R | 10 |

Martha's teacher told her that her experiment was not a fair test as the time taken for water to start boiling should not be 10 minutes for all the three containers as the heat conductivity of the materials are different.

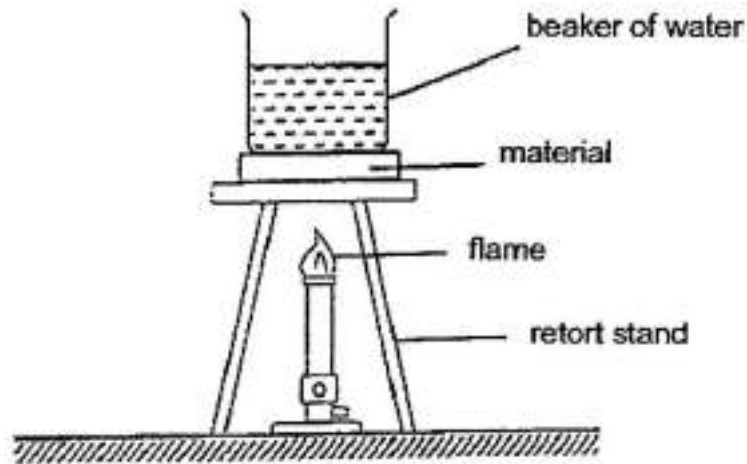
What would be the temperature of water if Martha continued to heat the beakers of boiling water for another five minutes?

| Materials | Temperature of water ($^{\circ}\text{C}$) |
|-----------|---|
| Q | |

Question 60 of 64

Primary 6 Science (Prelim) 0.2 pts

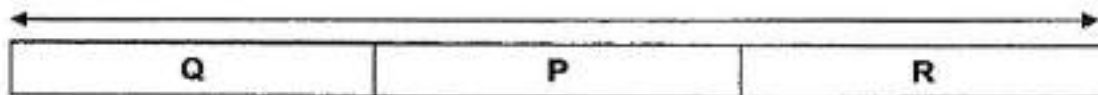
Martha used the set-up below to find out the heat conductivity of materials P, Q and R. The materials were of the same length and thickness. They were placed below a beaker of water with the same amount of heat applied to the set-ups.



The heat conductivity of materials P, Q and R is as follows.

poorest heat conductor

best heat conductor



She recorded the time taken for the water in each set up to boil in the table below.

| Materials | Time taken for water to start boiling (minutes) |
|-----------|---|
| P | 10 |
| Q | 10 |
| R | 10 |

Martha's teacher told her that her experiment was not a fair test as the time taken for water to start boiling should not be 10 minutes for all the three containers as the heat conductivity of the materials are different.

What would be the temperature of water if Martha continued to heat the beakers of boiling water for another five minutes?

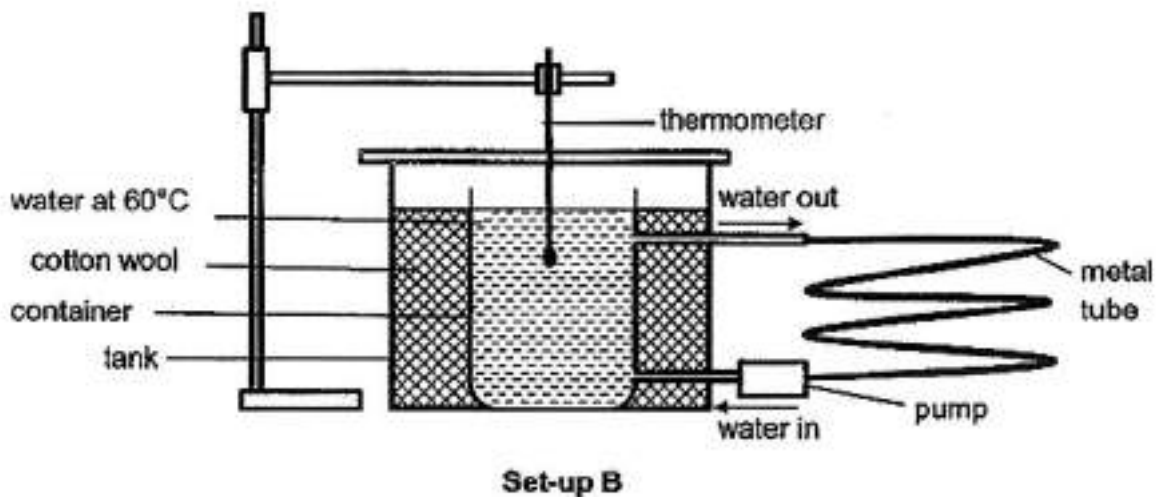
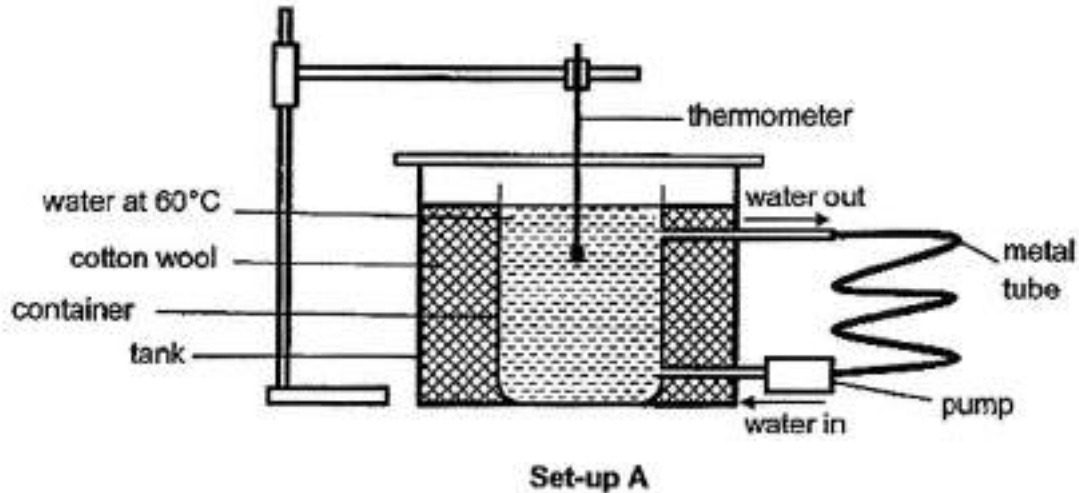
| Materials | Temperature of water (°C) |
|-----------|---------------------------|
| R | |

Question 61 of 64

Primary 6 Science (Prelim)

0 pts

Two identical containers were each filled with three litres of water at 60°C. Each container was then placed in identical larger tanks filled with cotton wool. A tube and a pump were attached to each container to allow a continuous flow of water out of the container and then back again. Set-up A has a shorter tube than set-up B.



Given that the set-ups were placed together in the same room, in which set-up would the water reach room temperature first? Explain your answer clearly. (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.

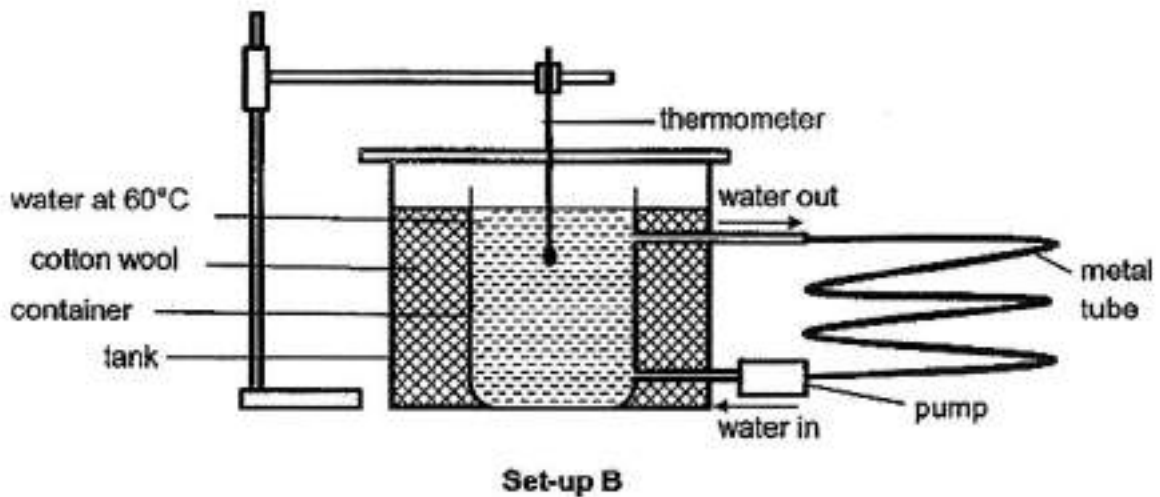
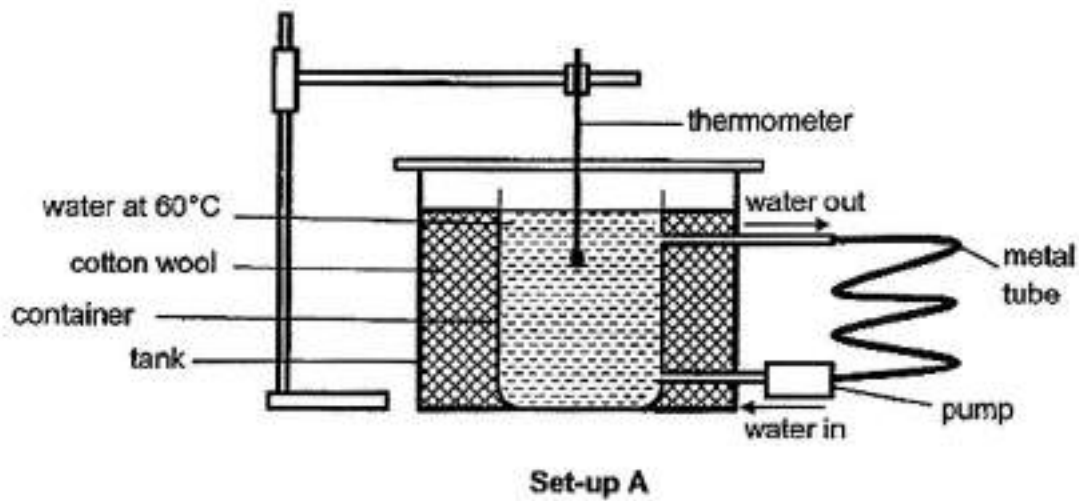
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 62 of 64

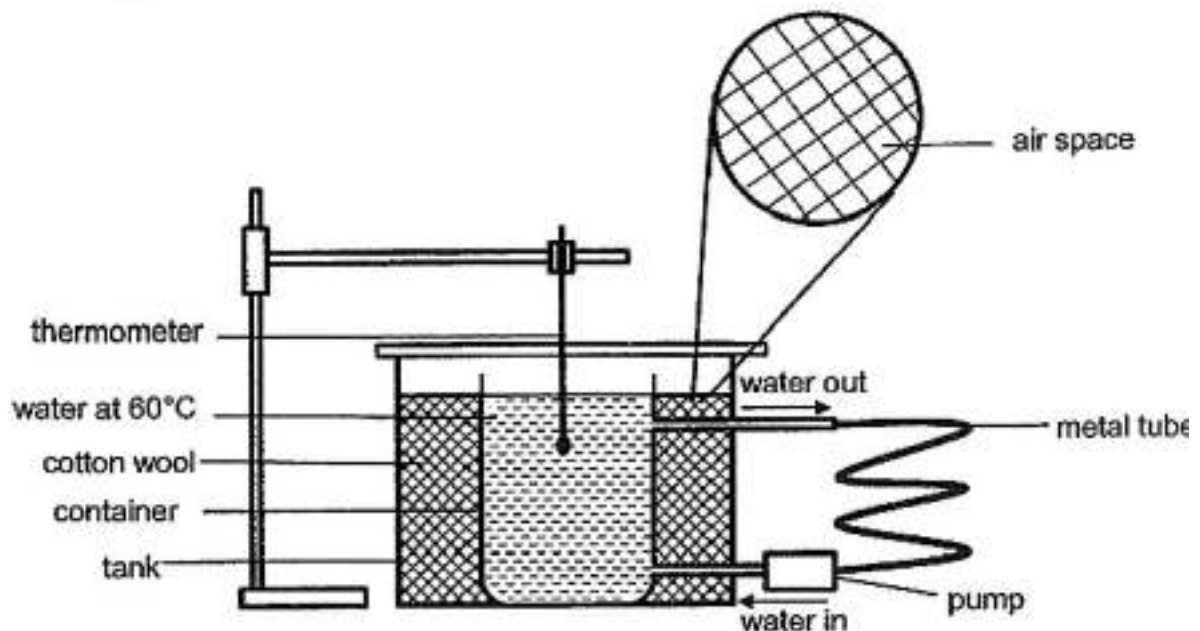
Primary 6 Science (Prelim)

0 pts

Two identical containers were each filled with three litres of water at 60°C. Each container was then placed in identical larger tanks filled with cotton wool. A tube and a pump were attached to each container to allow a continuous flow of water out of the container and then back again. Set-up A has a shorter tube than set-up B.



It was found that the cotton wool is filled with air spaces, as shown in the diagram below.



Explain the purpose of placing the containers into a larger tank filled with cotton wool. [2]

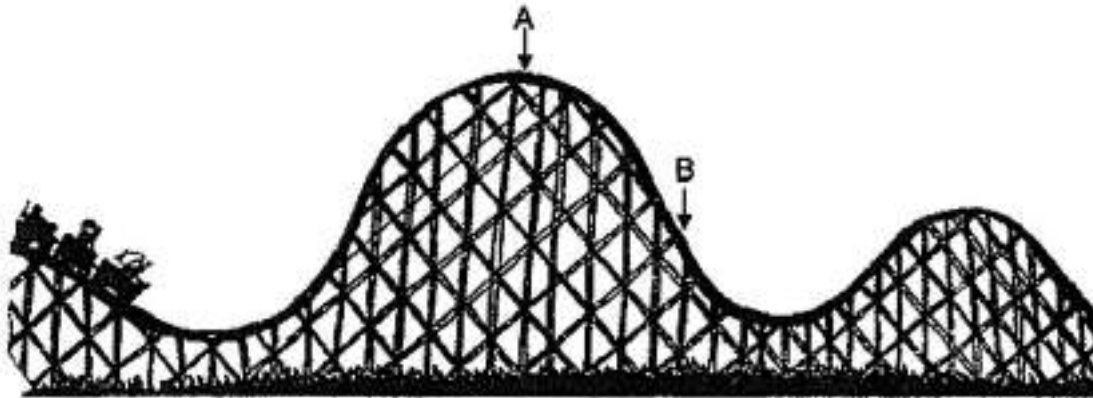
This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

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.

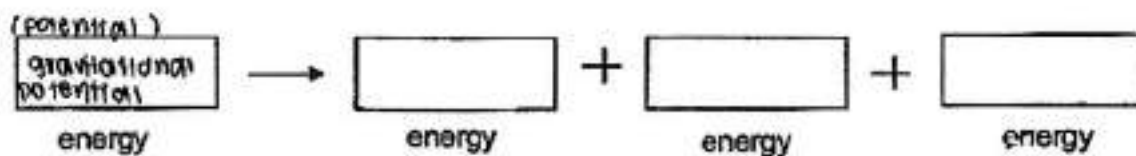
Question 63 of 64

Primary 6 Science (Prelim) 0 pts

The roller coaster is brought to the highest point A.



Write down the energy conversion for the roller coaster as it moves from A to B. [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.

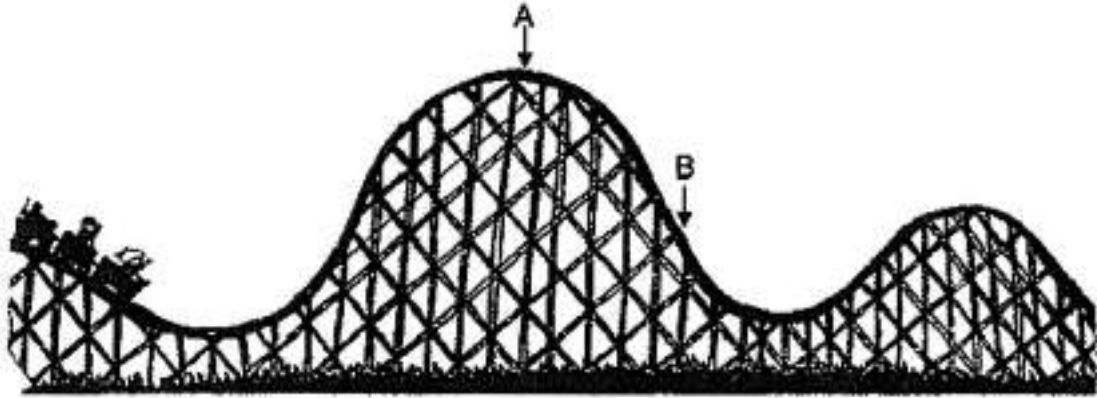
Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 64 of 64

Primary 6 Science (Prelim)

2 pts

The roller coaster is brought to the highest point A.



Fill in the blanks with 'increase' or 'decrease' as the roller coaster moves down from point A to point B.

1. []

| Points | Potential Energy |
|--------|------------------|
| A to B | |

A. Decrease

2. []

| Points | Kinetic Energy |
|--------|----------------|
| A to B | |

B. Increase

3. []

| Points | Speed |
|--------|-------|
| A to B | |