MARIS STELLA HIGH SCHOOL (PRIMARY)

SA2 EXAMINATION

SCIENCE

3 NOVEMBER 2020

BOOKLET A

NAME: _____ ( )

CLASS: Primary 3 ( )

24 questions

48 marks

Total Time for Booklets A & B: 1 h 30 min

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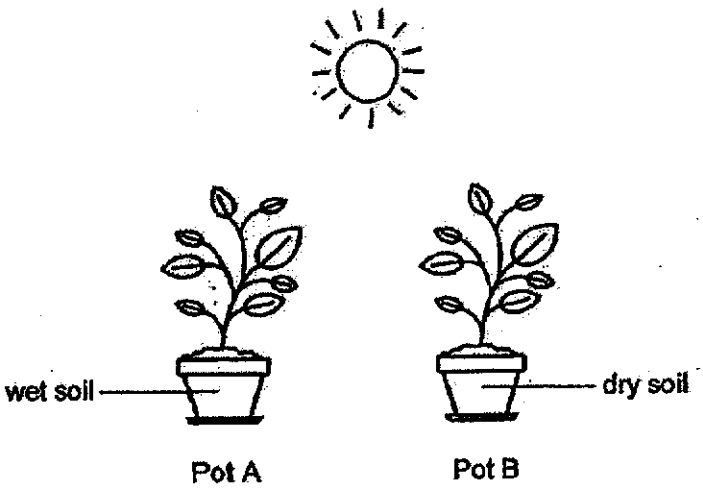
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For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS). **(48 marks)**

---

1 Nathaniel planted two identical plants in pots A and B. Pot A had wet soil and pot B had dry soil. Both pots were placed at the same location in the garden.



Two weeks later, Nathaniel noticed that the plant in pot A survived but the plant in pot B died.

Based on his observation, it shows that plants need _____ to survive.

(1) air
(2) soil
(3) water
(4) sunlight

2 What is the similarity between bacteria and fungi?

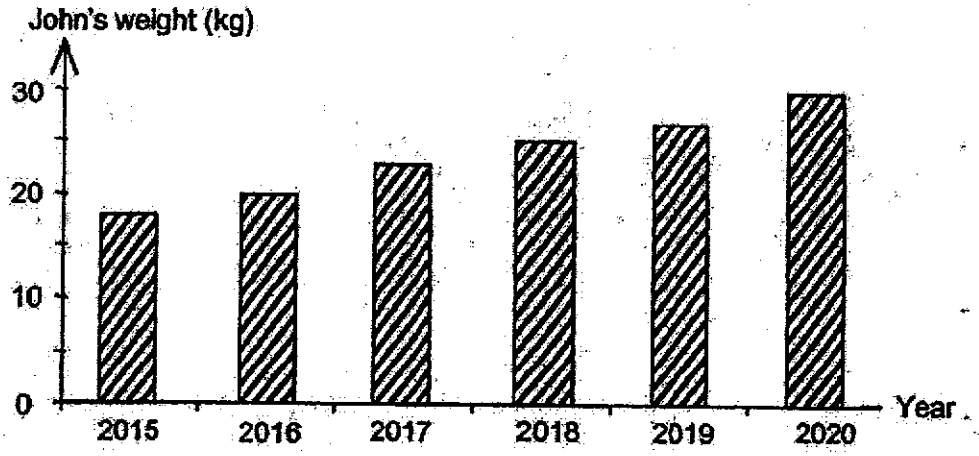
(1) Both reproduce by seeds.
(2) Both are non-living things.
(3) Both cannot make their own food.
(4) Both can only be seen with a microscope.

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3 The graph below shows the changes in John's weight over the years.



Which of the following characteristics of living things does the graph show?

(1) Living things grow.
(2) Living things reproduce.
(3) Living things respond to changes.
(4) Living things need air, food and water to survive.

4 The characteristics of two organisms, R and S, are shown below.

Characteristics	Organisms	
	R	S
makes its own food	✓	✓
reproduces by seeds	✓	

What could organisms R and S be?

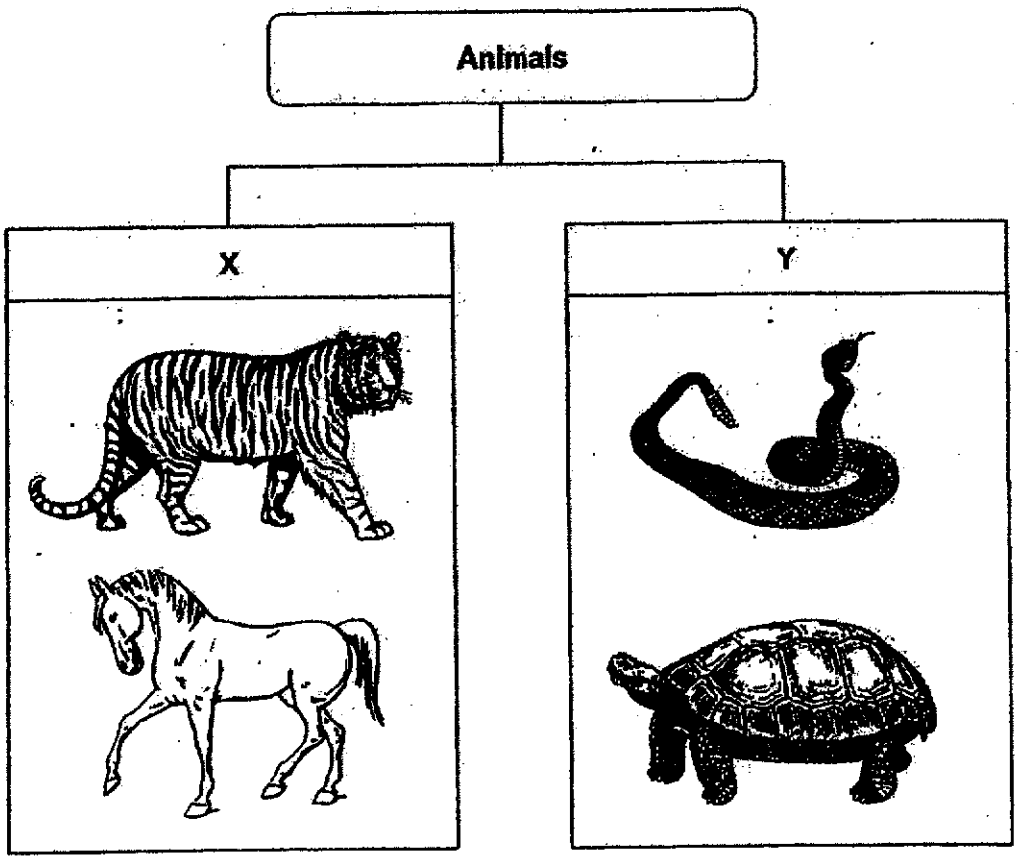
	R	S
(1)	fern	mushroom
(2)	mushroom	flowering plant
(3)	flowering plant	fern
(4)	flowering plant	mushroom

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5 Study the classification table below.



Which of the following represents X and Y?

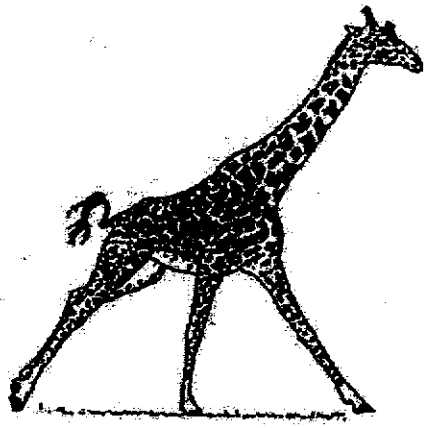
	X	Y
(1)	has fur	has moist skin
(2)	has hair	has scales
(3)	has feathers	has scales
(4)	has moist skin	has feathers

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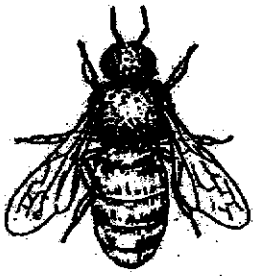
6 Danny wants to find out if an animal he saw is a mammal.



Which of the following characteristics will help Danny identify if the animal is a mammal?

(1) It cannot fly.
(2) It has four legs.
(3) It gives birth to its young.
(4) It does not have scales as outer covering.

7 Amy concluded that the animal shown below is an insect.



The animal is an insect because it _____.

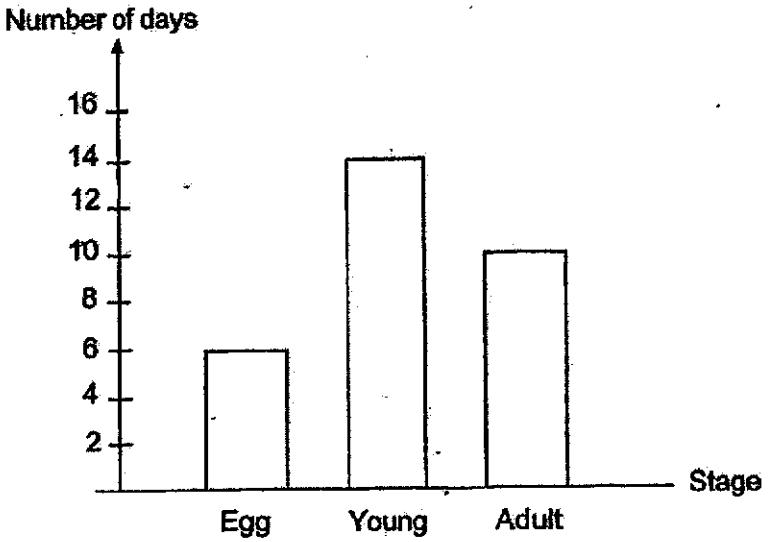
(1) lays eggs
(2) has wings
(3) has eight legs
(4) has three body parts

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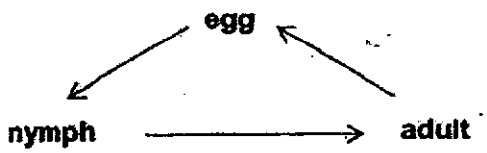
8 The graph below shows the number of days an animal remains in each stage of its life cycle.



Based only on the graph, which of the following statements is true about the life cycle of the animal?

(1) There are four stages in its life cycle.
(2) The animal spent fewer days as an adult than a young.
(3) The animal takes 30 days to become an adult after the egg is laid.
(4) After the egg is hatched, the animal takes another 20 days to become an adult.

9 The diagram below shows the life cycle of organism M.



Which of the following represents organism M?

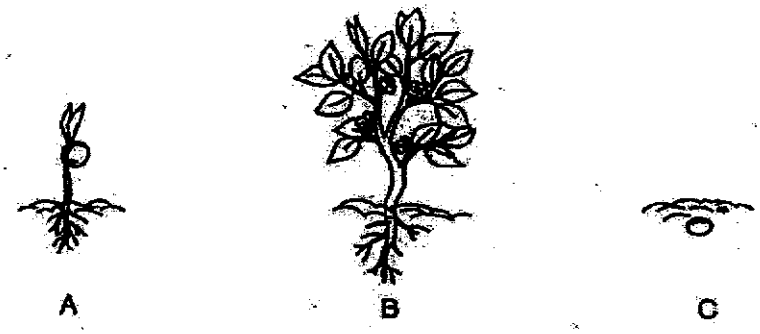
(1) frog
(2) chicken
(3) butterfly
(4) cockroach

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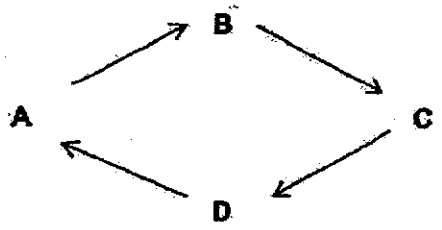
10 The diagram below shows the different stages of a plant.



Which of the following shows the correct order of stages of the plant?

(1) A → C → B
(2) B → C → A
(3) B → A → C
(4) C → B → A

11 A, B, C and D represent different stages in the life cycle of a beetle.



If stage D represents the pupal stage, what stage does B represent?

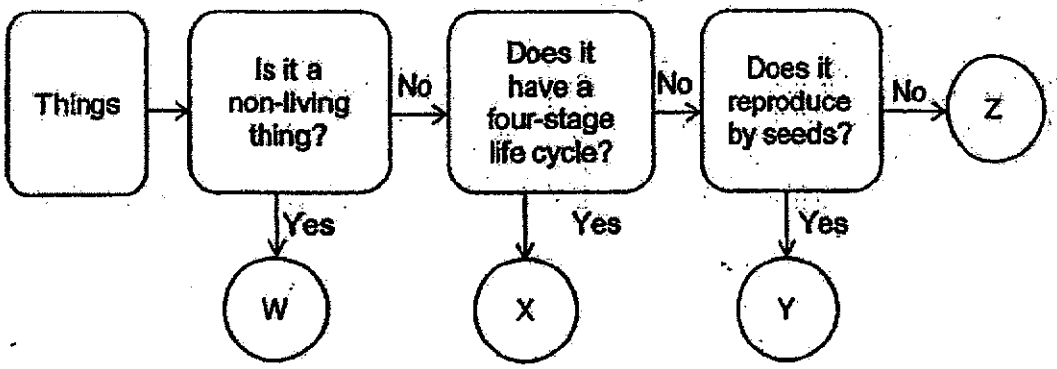
(1) egg
(2) larva
(3) adult
(4) nymph

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12 Study the flowchart below.



Which of the following represents plant M as shown below?



Plant M

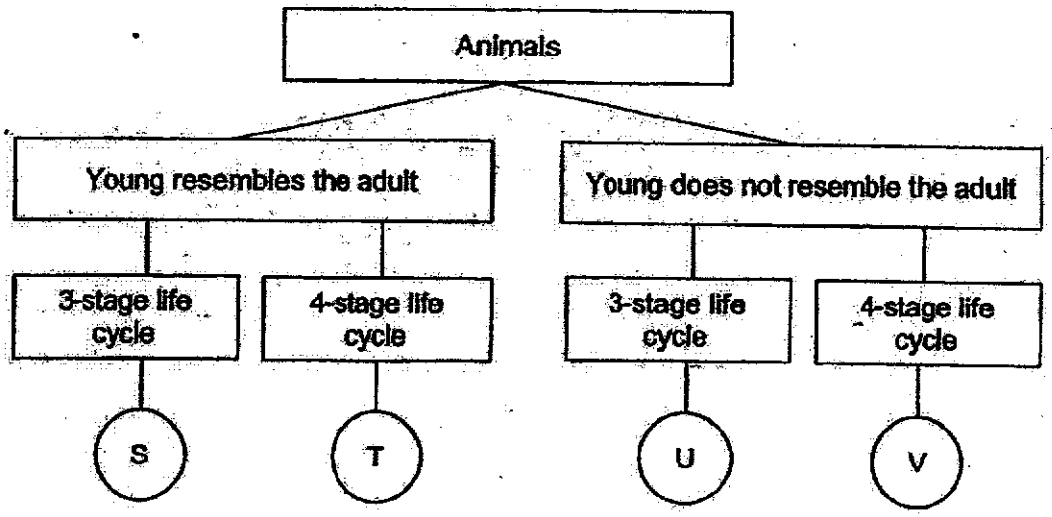
(1) W
(2) X
(3) Y
(4) Z

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13 Study the classification chart below.



Which of the following best represents a chicken?

(1) S
(2) T
(3) U
(4) V

14 Which of the following is the function of the stem of a plant?

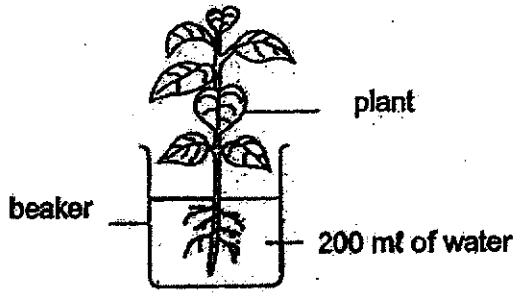
(1) makes food
(2) absorbs water
(3) keeps the plant upright
(4) anchors the plant firmly to the ground

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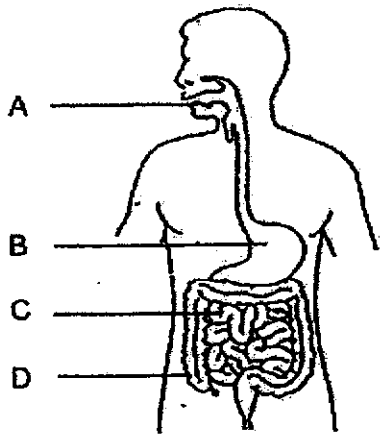
15 Zachary set up an experiment as shown below. The beaker contains 200 mℓ of water.



What is the likely amount of water in the beaker after 3 days?

(1) 150 mℓ
(2) 200 mℓ
(3) 250 mℓ
(4) 270 mℓ

16 A picture of the human digestive system is shown.



Which part is the large intestine?

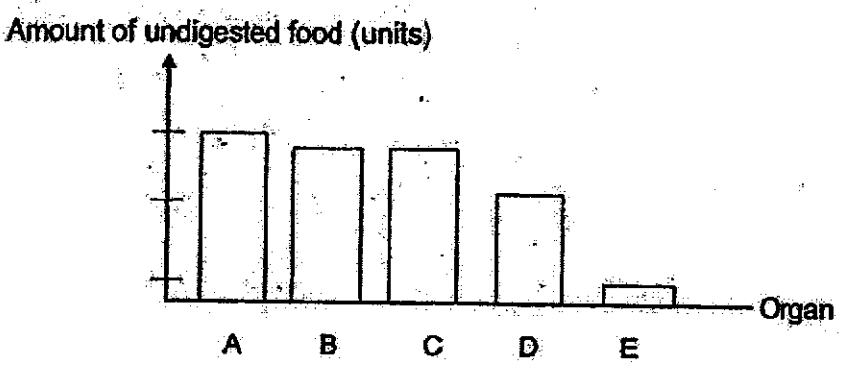
(1) A
(2) B
(3) C
(4) D

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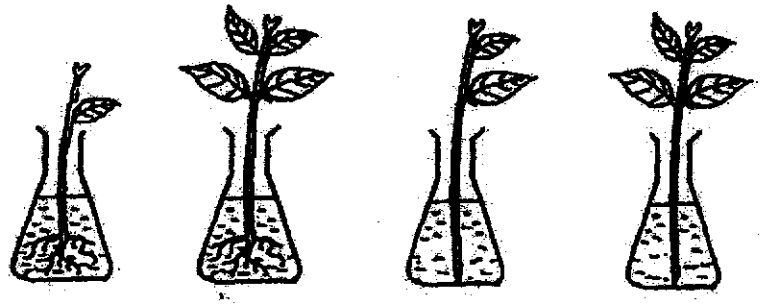
17 The graph below shows the amount of undigested food entering different parts of the digestive system. Organ A represents the mouth.



Which of the following statements is correct?

(1) Organ B produces digestive juices.
(2) Organ D digests more food than organ C.
(3) No digestion takes place in organs A and B.
(4) Organ E contains more undigested food than organ A.

16 Study the four set-ups below.



Which two set-ups should be used to find out if the presence of roots affect the growth of the plant?

(1) A and B
(2) A and C
(3) B and D
(4) C and D

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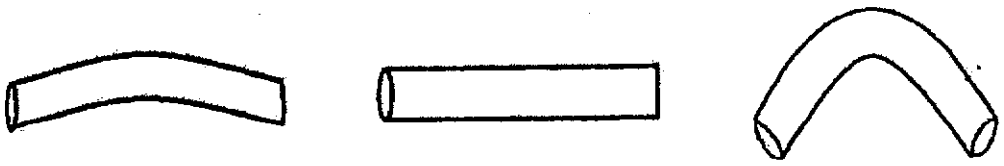
19 The following objects are classified into two groups, A and B.

A	B
eraser	table cloth
plastic bag	cotton t-shirt
metal spoon	bath towel

In which of the following groups should a glass marble be classified?

	Group	Reason
(1)	A	It is stiff.
(2)	A	It is waterproof.
(3)	B	It is flexible.
(4)	B	It can float on water.

20 Josh carried out an experiment using three different rods, X, Y and Z. The diagram below shows how rods X, Y and Z look like after they are bent using the same amount of strength.



Rod X Rod Y Rod Z

Which of the following statements is correct?

(1) Rod Z is the stiffest.

(2) Rod X is the strongest.

(3) Rod X is less flexible than rod Z.

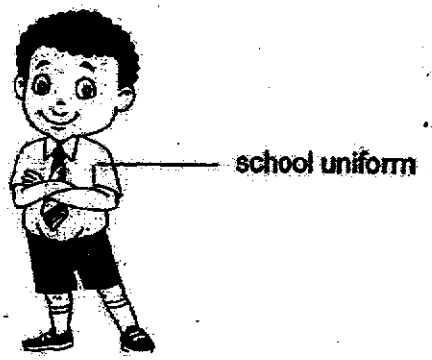
(4) Rod Y is more flexible than rod Z.

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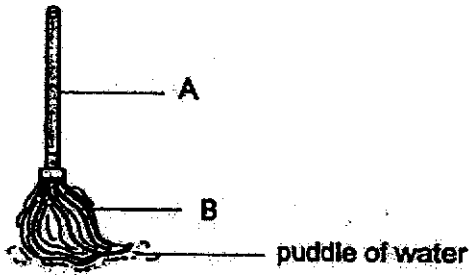
21 The school uniform shown below is made of fabric.



Which of the following explains why fabric is suitable for making the school uniform?

(1) It is stiff.
(2) It is flexible.
(3) It is waterproof.
(4) It can sink in water.

22 The picture below shows a mop used for drying wet floor.



Which of the following correctly describes the properties of parts A and B?

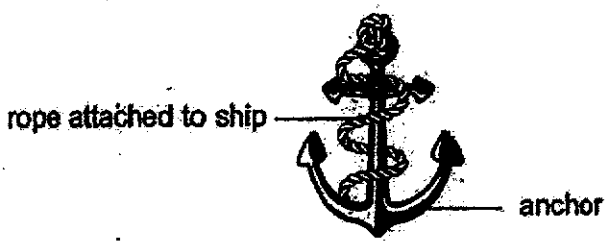
	A	B
(1)	stiff	absorbent
(2)	stiff	waterproof
(3)	flexible	absorbent
(4)	flexible	waterproof

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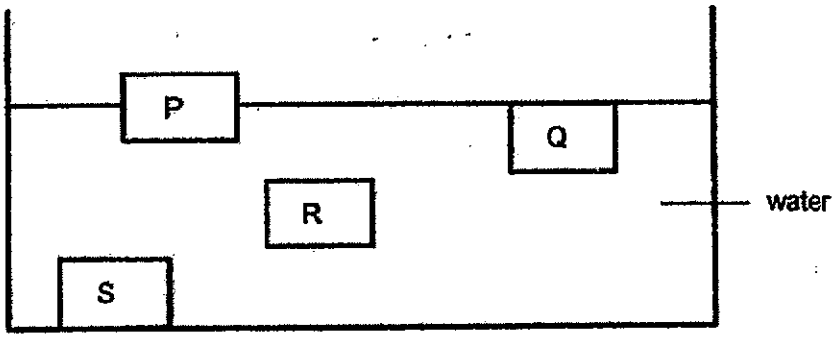
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23 An anchor as shown below is tied to a ship and used to prevent the ship from drifting due to wind or water current.



Four materials, P, Q, R and S, are placed in a container of water to test for their suitability to make an anchor. The results are shown below.



Which material is most suitable for making an anchor?

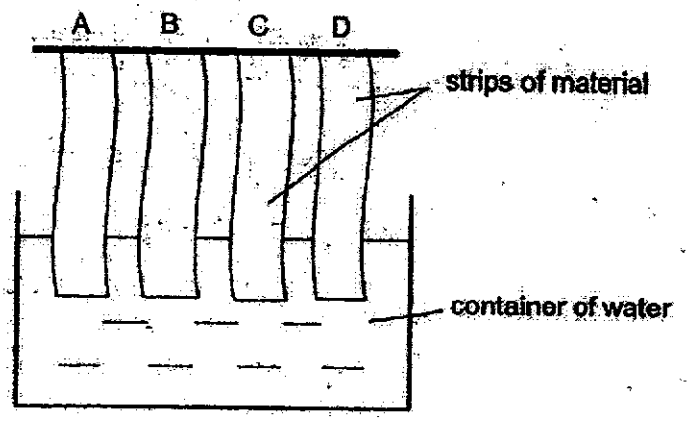
(1) P
(2) Q
(3) R
(4) S

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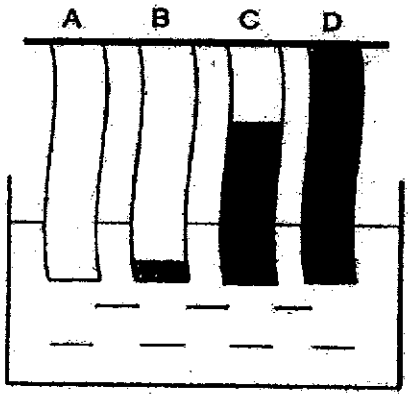
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24 Natalie conducted an experiment to test the absorbency of materials. Materials A, B, C and D are dipped into a container of water as shown.



The diagram below shows what she observed after 5 minutes.



Based on her observation, which material is most suitable for making a raincoat?

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

Go on to Booklet B

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MARIS STELLA HIGH SCHOOL (PRIMARY)

SA2 EXAMINATION

SCIENCE

3 NOVEMBER 2020

BOOKLET B

NAME: _____ ( )

CLASS: Primary 3 ( )

10 questions

32 marks

Total Time for Booklets A & B: 1 h 30 min

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FOLLOW ALL INSTRUCTIONS CAREFULLY.

Booklet A:	**/ 48**
Booklet B:	**/ 32**
Grand Total:	**/ 80**

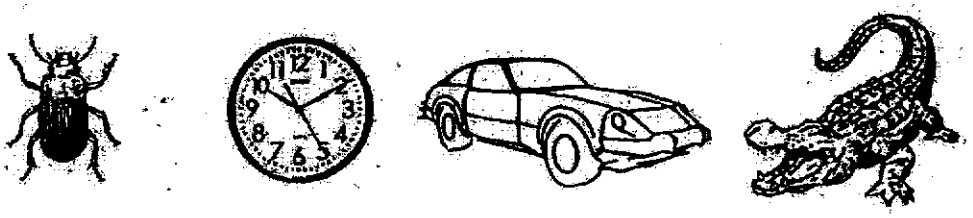
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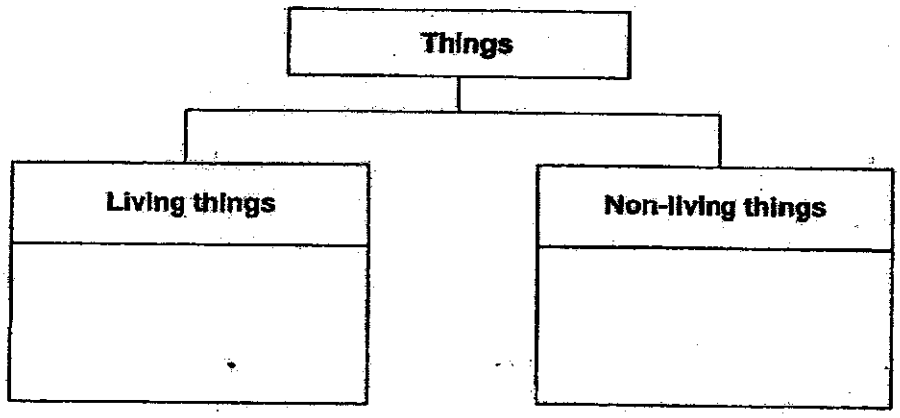
For questions 25 to 34, write your answers in this booklet. The number of marks available is shown in brackets [ ] at the end of each question or part question. **(32 marks)**

25 Study the four things given below.



A B C D

(a) Classify A, B, C and D in the classification chart below. [2]



(b) State one difference between living and non-living things. [1]

_____

_____

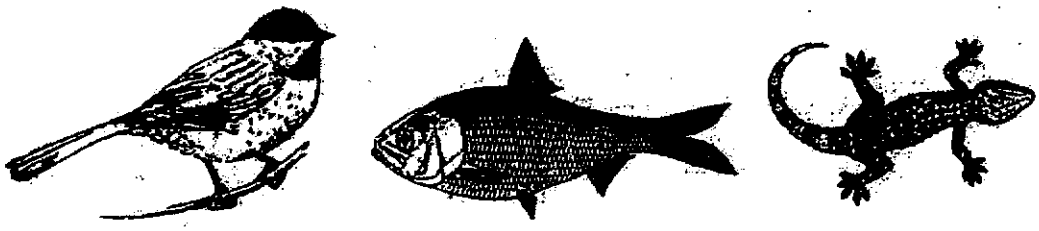
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26 Study the three animals, P, Q and R, below.



Animal P Animal Q Animal R

(a) Which animal group does animal R belong to? [1]

_____

(b) Identify the outer covering of animals P and Q.

Animal P : _____

Animal Q : _____

(c) State the method of reproduction for animals P, Q and R. [1]

_____

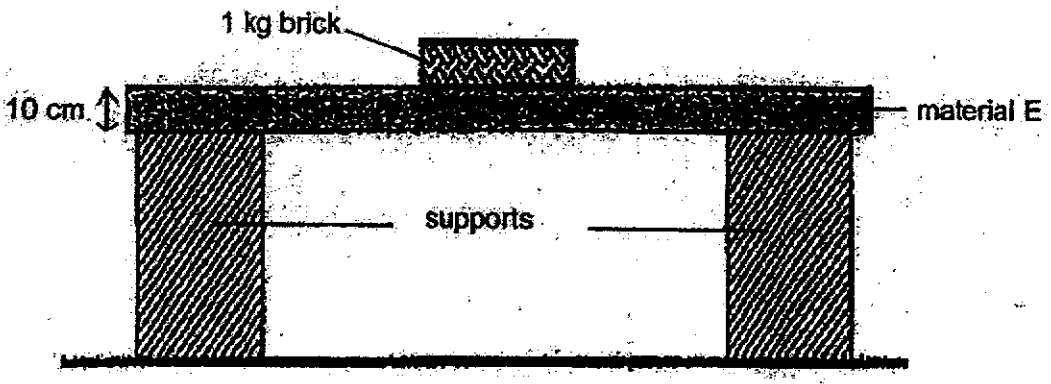
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27 Jeremy conducted an experiment as shown below.



He stacked 1 kg bricks on material E, one at a time, until it broke. He then repeated the experiment with materials F and G. He recorded the results in the table below.

Material	Number of 1 kg bricks the sheet of material can support before breaking
E	9
F	70
G	20

(a) What property of material was Jeremy testing? [1]

_____

(b) Based on Jeremy's results, what is different between materials E and G? [1]

_____

_____

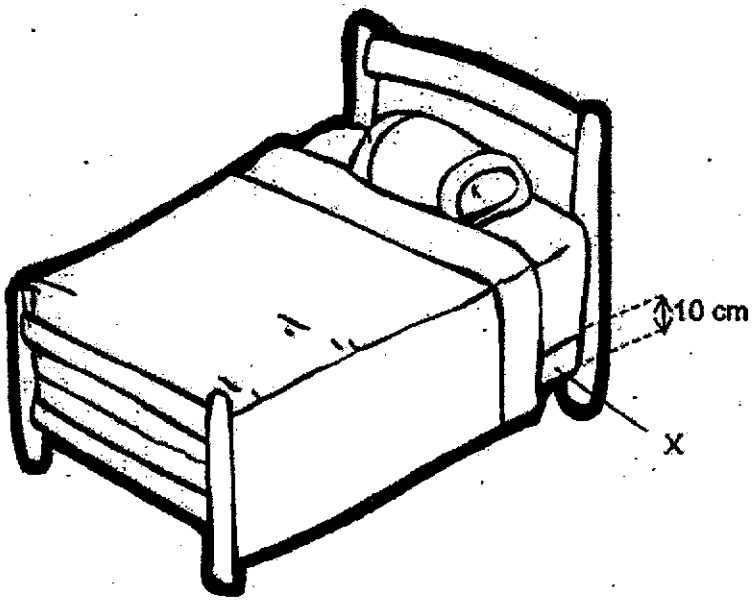
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Jeremy wants to buy a bed frame that is safe for sleeping. He is 20 kg.



(c) Based on the results of Jeremy's experiment, which material, E, F or G, is most suitable for making part X of the bed? Explain why. [2]

_____

_____

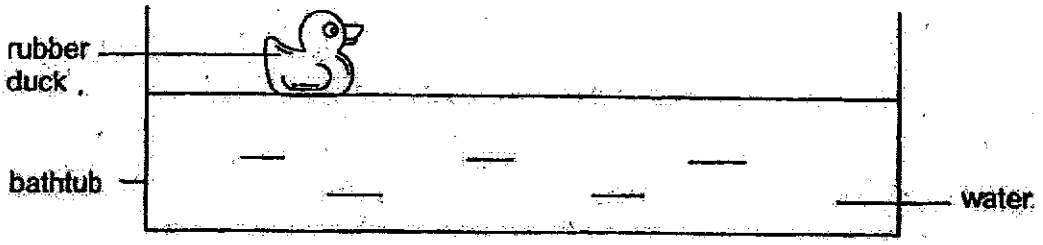
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28 Cyril placed a rubber duck in a bathtub of water as shown below.



Cyril then tested the properties of materials A, B and C. He recorded his results in the table below.

	A	B	C
Does it absorb water?	Yes	No	Yes
Does it float?	No	Yes	Yes

(a) List the properties of material A. [1]

(b) Which material, A, B or C, is most suitable to make the rubber duck? Explain your answer. [2]

(c) When Cyril squeezes the rubber duck, it makes a 'quack' sound.
What property of the material allows him to squeeze the rubber duck? [1]

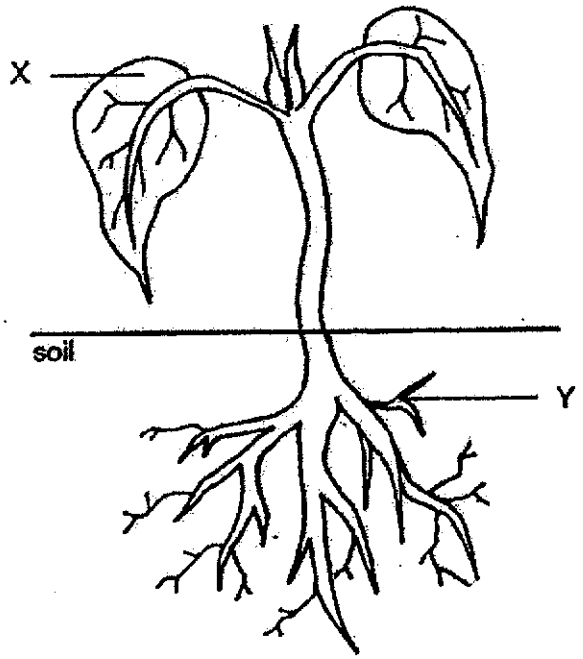
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29 The diagram below shows a plant.



(a) Name plant part X. [1]

_____

(b) Tick (✓) the function(s) of part Y. [1]

- ☐ takes in water
- ☐ keeps the plant upright
- ☐ anchors the plant to the ground

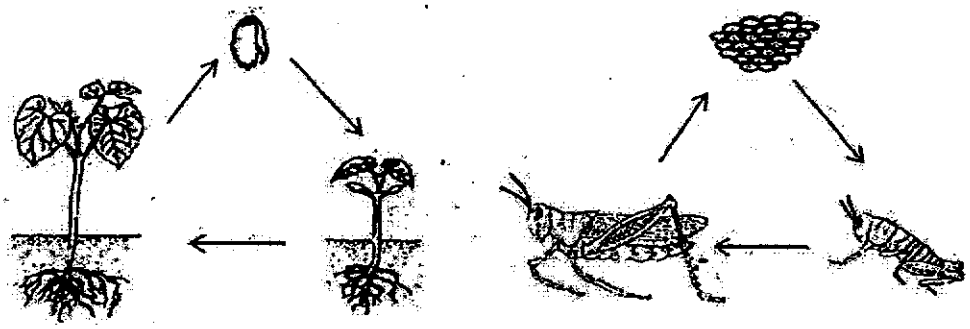
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30 Study the life cycles of plant G and animal H.



Life cycle of plant G

Life cycle of animal H

(a) State two similarities between the life cycles of plant G and animal H. [2]

Similarity 1: _____

_____

Similarity 2: _____

_____

(b) State two characteristics of living things that can be observed from the life cycles shown above. [2]

1. _____

2. _____

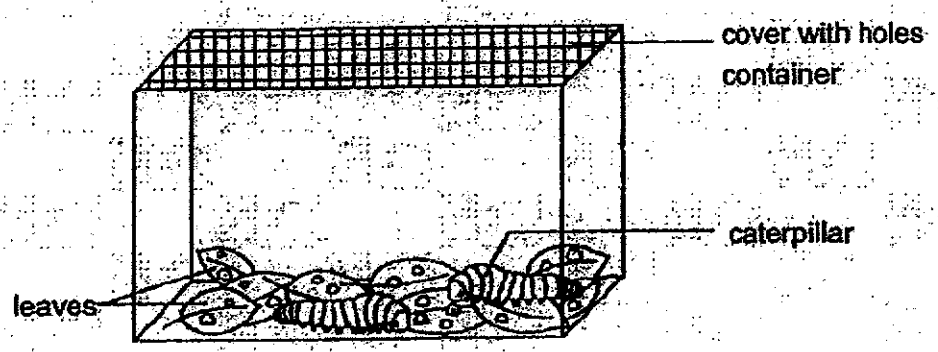
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31 Devi wanted to observe how caterpillars grow. She placed two caterpillars in a container that is filled with many leaves.



(a) Why is it important for the cover of the container to have holes? [1]

After two weeks, Devi observed that the caterpillars had grown and looked different.

(b) After the caterpillars changed to the next stage of their life cycle, will the number of leaves in the container *increase*, *decrease* or *remain the same*? [1]

(c) Explain your answer in (b). [1]

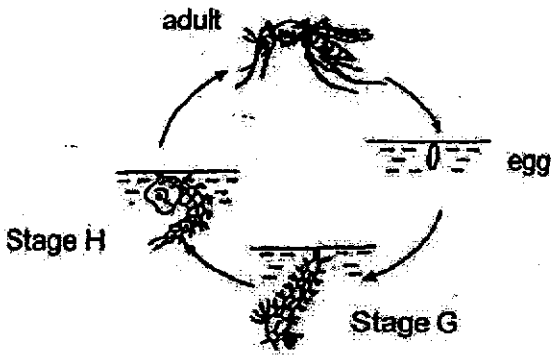
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32 The diagram shows the life cycle of a mosquito. Other than the adult stage, the other three stages of mosquito are found in water.

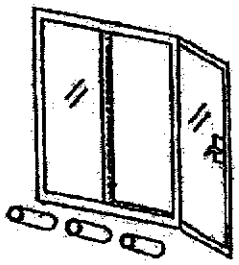


(a) Name stages G and H. [2]

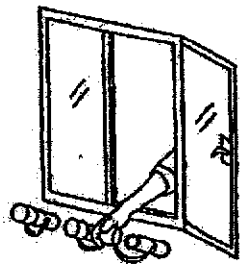
Stage G : _____

Stage H : _____

(b) Dengue fever is a disease spread by infected Aedes mosquitoes. One method to prevent the spread of dengue is by covering bamboo pole holders found outside the windows of flats. Uncovered pole holders may collect water when it rains heavily.



Uncovered pole holders



Covered pole holders

How does covering the bamboo pole holders help prevent the spread of dengue? [1]

_____

_____

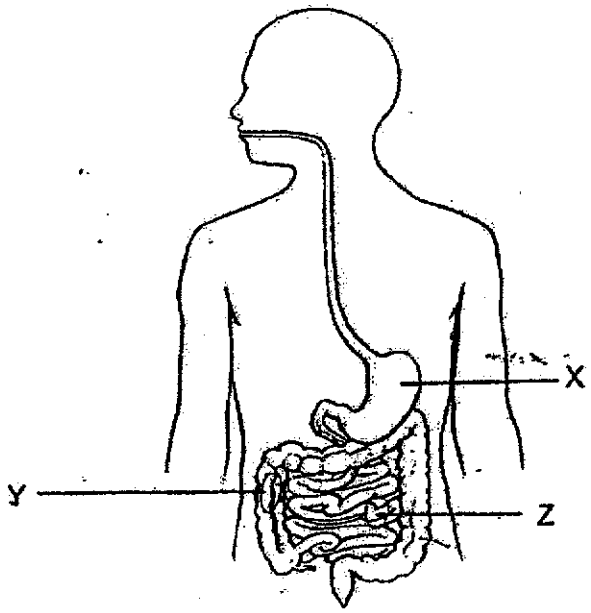
	3

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33 The diagram below shows the human digestive system.



Read the statements carefully. Put a tick (✓) in the appropriate boxes. [2]

	Statements	True	False
(a)	Both X and Y contain digestive juices to digest food.		
(b)	Z is where water from undigested food is absorbed.		

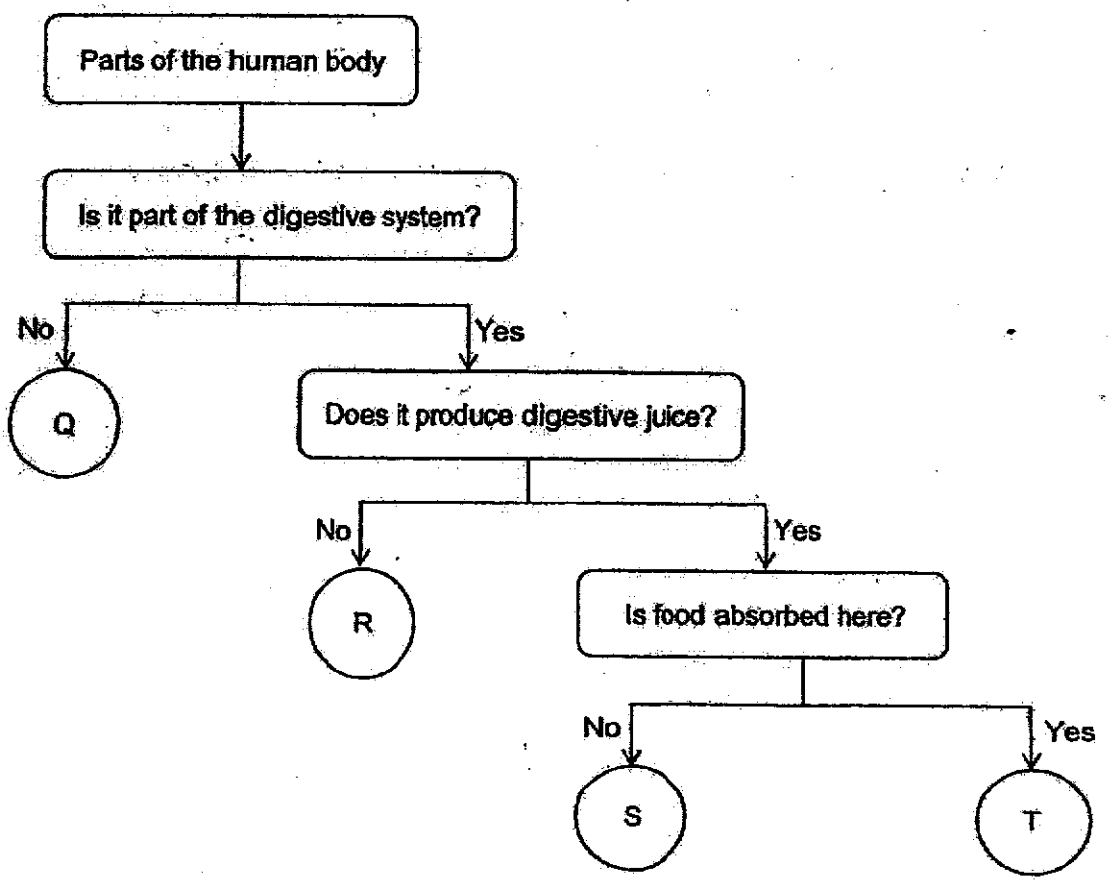
	2

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34 Study the flowchart below.



(a) Match the body parts to letters Q, R, S and T above. [2]

Body part	Letter
gullet	
small intestine	

2

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(b) State a difference between parts Q and S. [1]

_____

_____

(c) State a similarity between parts S and T. [1]

_____

_____

End of Booklet B

	2

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ANSWER KEY

YEAR : 2020
LEVEL : PRIMARY 3
SCHOOL : MARIS STELLA HIGH SCHOOL
SUBJECT : SCIENCE
TERM : SA2

BOOKLET A

Q1	3	Q2	3	Q3	1	Q4	3	Q5	2
Q6	3	Q7	4	Q8	2	Q9	4	Q10	2
Q11	1	Q12	3	Q13	1	Q14	3	Q15	1
Q16	4	Q17	2	Q18	3	Q19	2	Q20	3
Q21	2	Q22	1	Q23	4	Q24	1		

BOOKLET B

Q25	a) A and D are living things while C and B are non-living things. b) Living things can respond to changes around them while non-living things are not bale to respond to changes around them.
Q26	a) Reptile b) Animal P: Feathers Animal Q: Scales c) All three reproduce by laying eggs.
Q27	a) He is testing how strong the materials are. b) Material E can hold lesser number of 1kg bricks than material G . c) F is the most suitable. It can withstand the most weight before breaking.
Q28	a) Material A is absorbent and it do not float on water. b) B is the most suitable. It does not absorb water and it floats on water. c) Flexibility
Q29	a) Leaves b) Part Y takes in water and anchors the plant to the ground.

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Q30	a) Both young resembles its adult. Both have a 3 stage life cycles. b) Living things can grow and reproduce.
Q31	a) So that the caterpillars will have air. b) It will remain the same. c) The next stage do not eat food.
Q32	a) Stage G: Larva Stage H: Pupa b) Adult mosquito would not have a place to lay their eggs.
Q33	a) False b) False
Q34	a) Gullet: R Small intestine: T b)Part Q is not part of the digestive system but part S is part of the digestive system. c) Both produce digestive juices.

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