METHODIST GIRLS' SCHOOL
Founded in 1887

PRIMARY 4
SCIENCE
WEIGHTED ASSESSMENT 3 2025

Total Time for Paper: 45 min

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.

Name: _____ ( )

Class: Primary 4._____

Date : _____

Parent's signature: _____

Section A	16
Section B	9
Total	25

This paper consists of 13 printed pages including this page.

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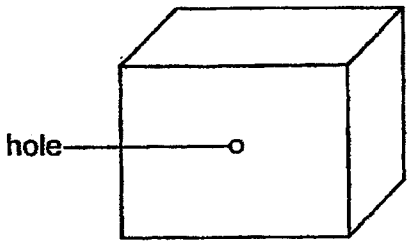
Section A

For each question from 1 to 8, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer accordingly below. [16 marks]

1	5
2	6
3	7
4	8

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1 Ravi placed different items, one at a time, into the box below and looked through the hole. He carried out this experiment in a dark room with no windows, door closed and all lights turned off.



Which of the following item(s) was Ravi able to see through the hole when he placed it into the box one at a time?

A: 

lighted torch

B: 

mirror

C: 

science textbook

D: 

a can of tomato soup

(1) A only
(2) A and B only
(3) B, C and D only.
(4) A, B and D only

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2 Look at the mug shown below.



Which one of the following shadows **cannot** be formed by this object?

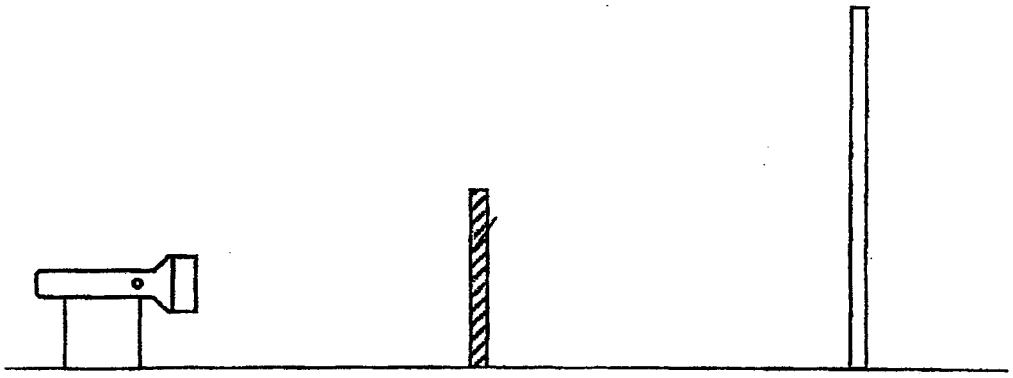
(1) 

(2) 

(3) 

(4) 

3 Siti set up an experiment as shown below to cast a shadow on the screen.



As she moved one of the things in the set-up above, the shadow on the screen became bigger. Siti moved the _____.

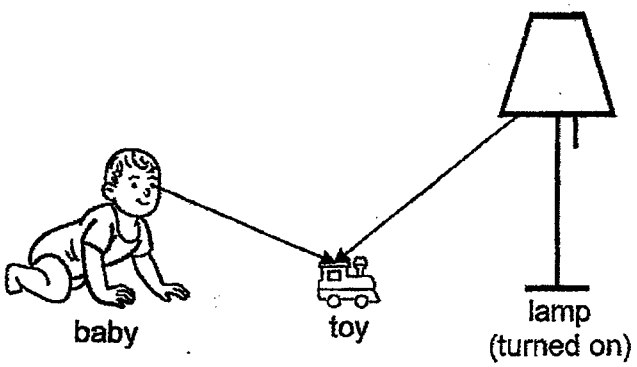
(1) torch nearer to the ceramic tile
(2) screen nearer to the ceramic tile,
(3) ceramic tile further from the torch
(4) torch further from the ceramic tile,

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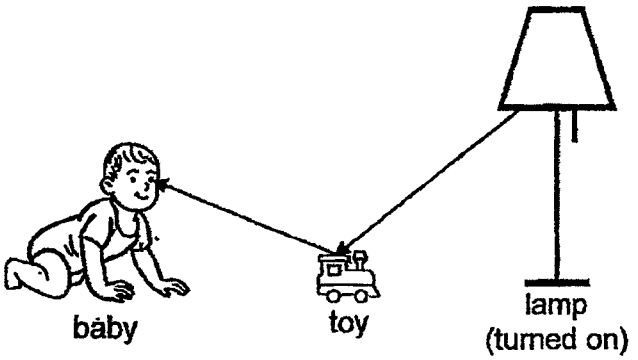
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4 The arrows in the diagrams below show the direction in which light travels. Which diagram correctly shows how the baby can see the toy?

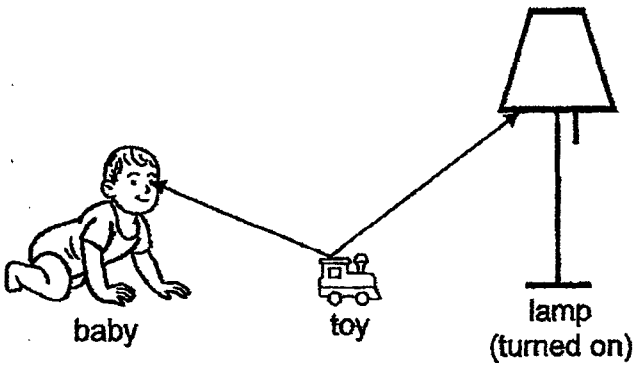
(1)



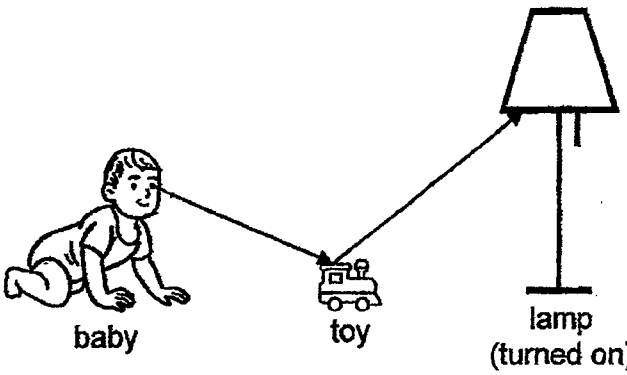
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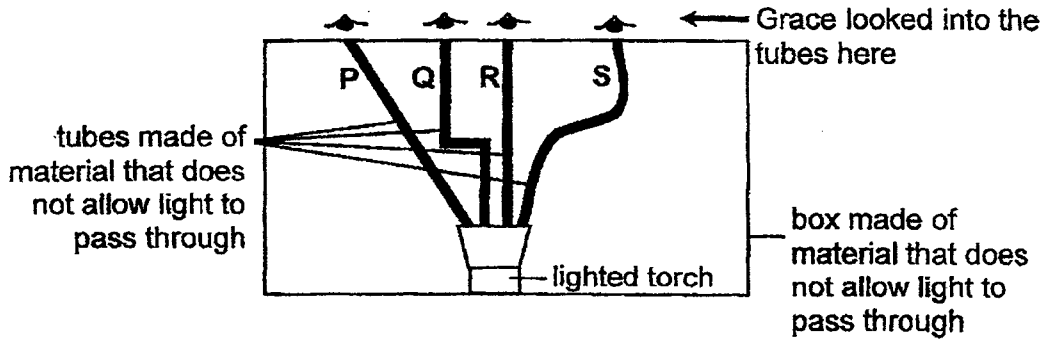
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5 Grace set up an experiment as shown below. Tubes P, Q, R and S are tubes made of the same type of material that does not allow light to pass through. The box was sealed up except for 4 holes where she looked into the 4 tubes.



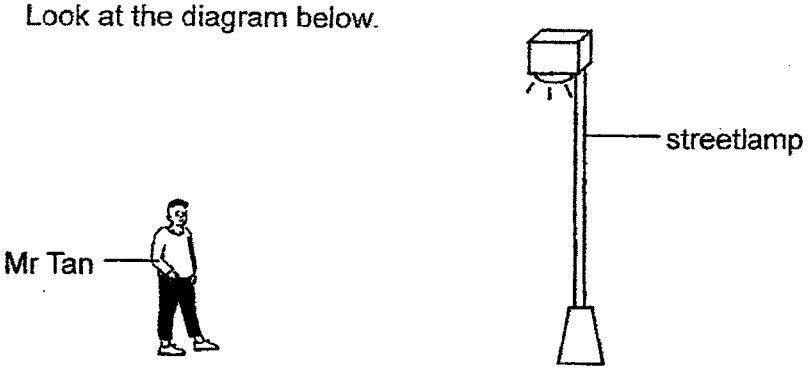
The aim of Grace's experiment was to find out _____.

(1) how shadows are formed
(2) if the torch is a light source
(3) if light travels in straight lines
(4) the shapes of shadows cast by the tubes

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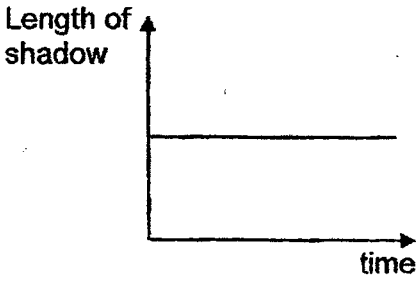
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6 Look at the diagram below.

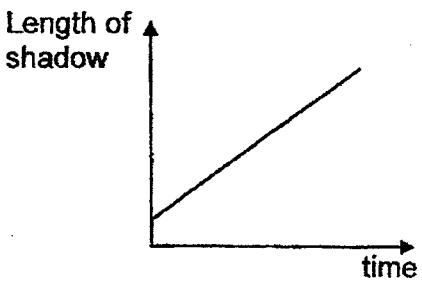


Which graph shows how the length of Mr Tan's shadow changed as he walked past the streetlamp from position X to position Y in a straight line?

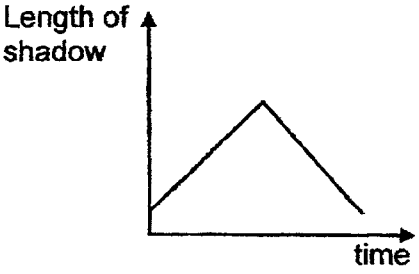
(1)



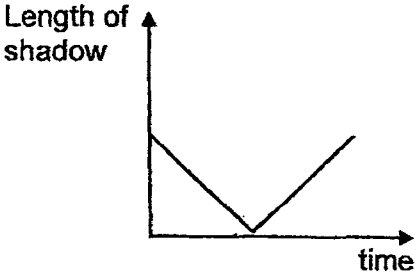
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(3)



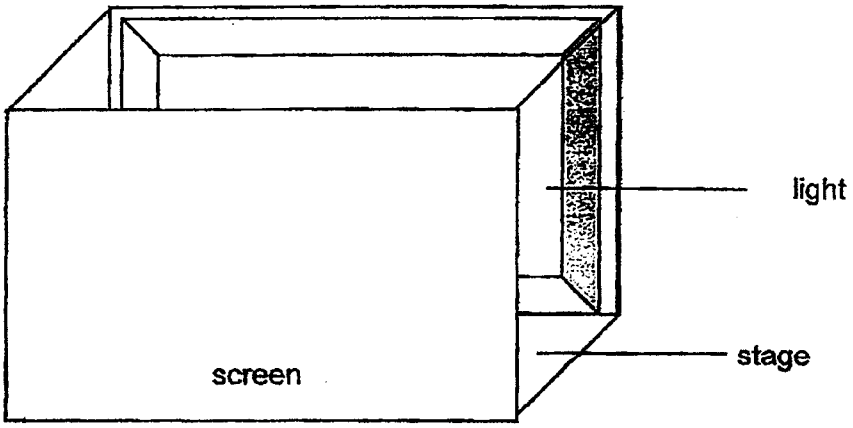
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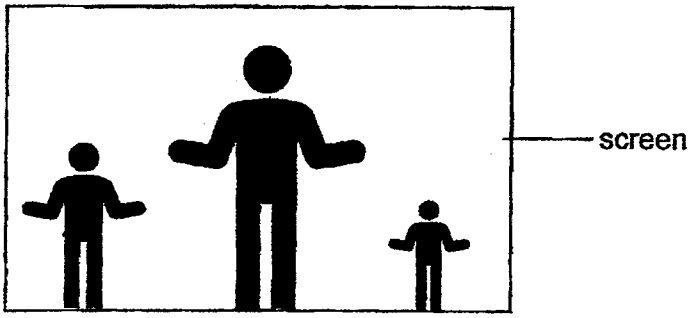
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7 Aisha put up a puppet show using a box as shown below.

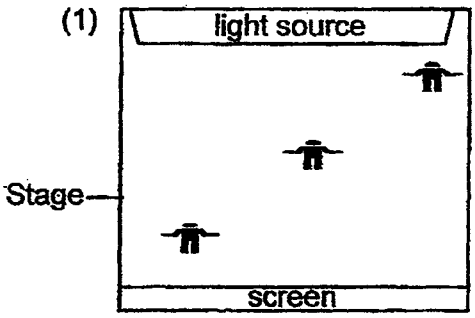


Aisha used three puppets of the same size for her show. During a scene in the show, the puppets appeared on the screen as shown below.

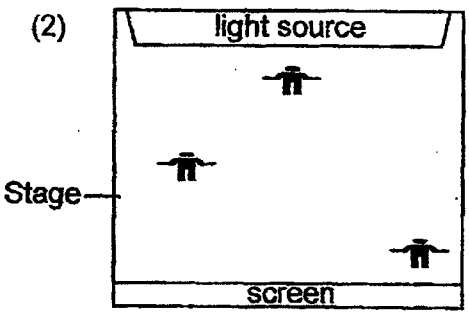


Which of the following shows correctly, the position of her three puppets on the stage during this scene?

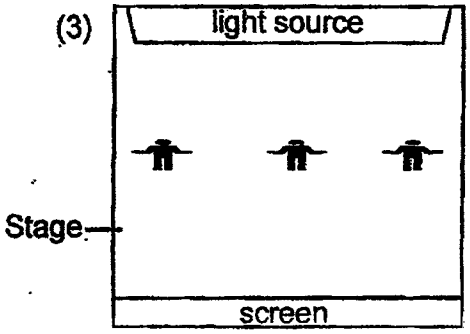
(1)



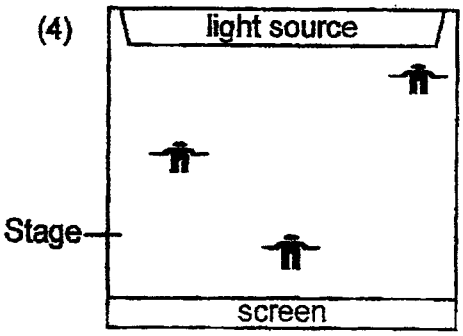
(2)



(3)



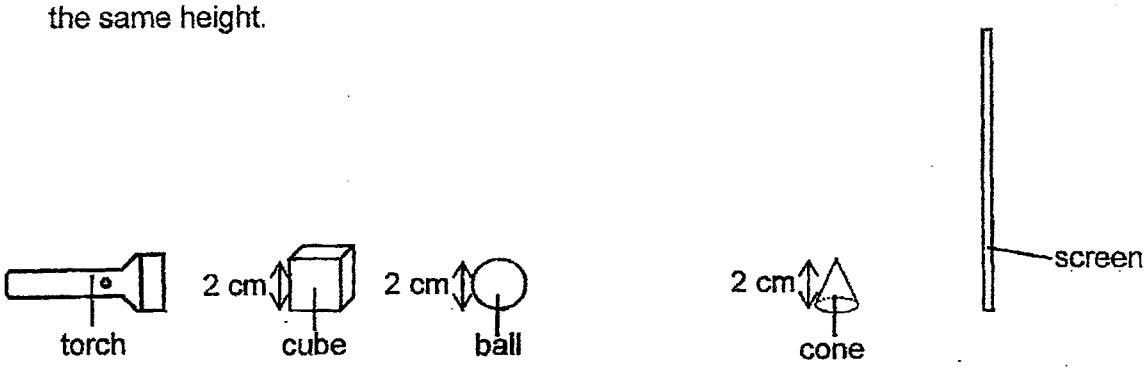
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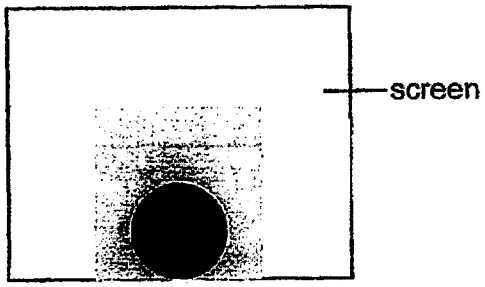
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8 Su Ching set up an experiment as shown below. The cube, ball and cone are of the same height.



When she switched on the torch, she observed the shadow formed on the screen as shown below.



Based on Su Ching's observation, which of the following is correct?

	Cube	Ball	Cone
1	allows some light to pass through	allows most light to pass through	does not allow light to pass through
2	not possible to tell	allows most light to pass through	allows some light to pass through
3	does not allow light to pass through	not possible to tell	does not allow light to pass through
4	allows some light to pass through	does not allow light to pass through	not possible to tell

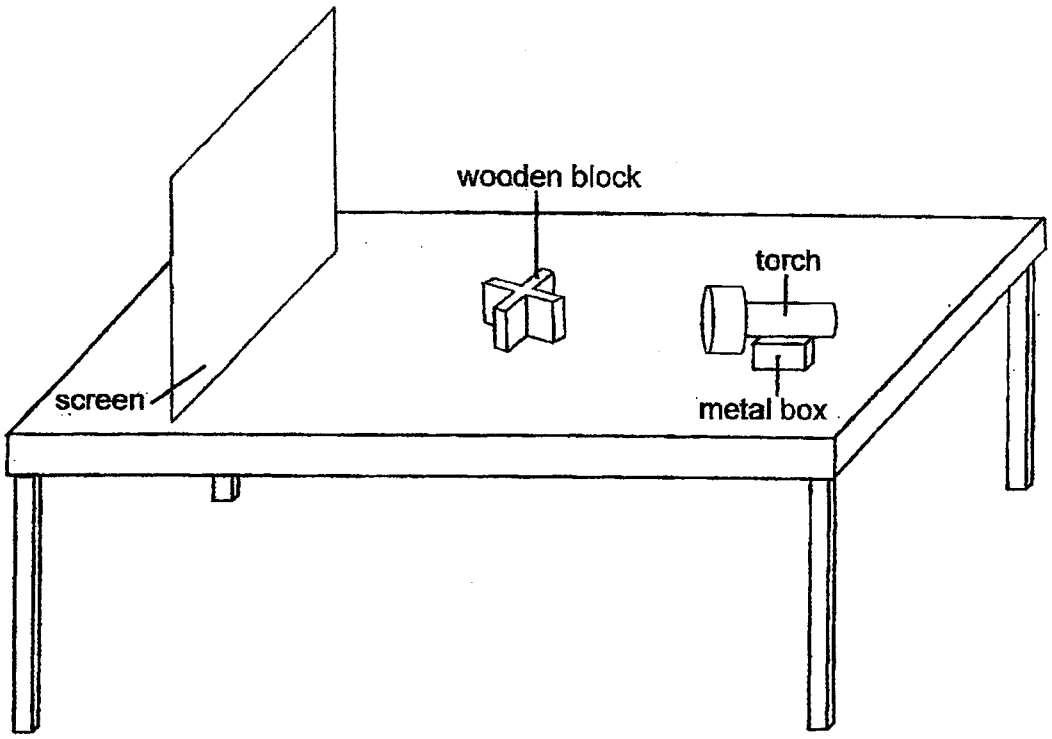
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Section B

For questions 9 to 12 write your answers in the space provided. [9 marks]

9 Adora set up some items as shown below.



(a) When she switched on the torch, a shadow was cast on the screen. Draw the shadow that she saw on the screen in the space below. [1]

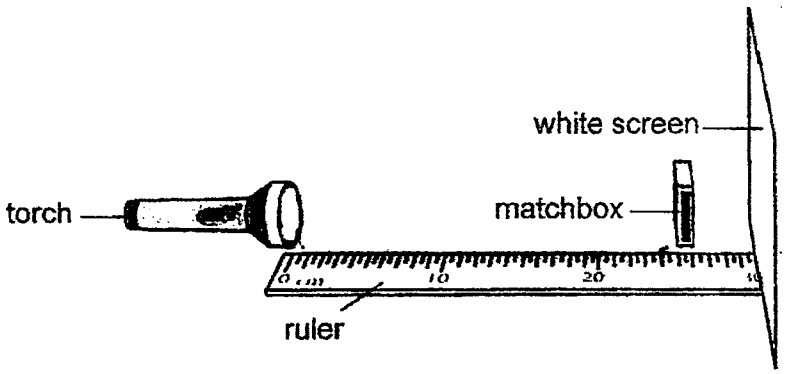
(b) Using exactly the same apparatus only, and without moving the wooden block, how can Adora cast a smaller shadow on the screen? [1]

2

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10 Ahmad set up an experiment as shown below. He wanted to find out how the distance between a light source and an object affects the height of the shadow cast by the object on a screen. He moved the torch closer and closer to the matchbox during his experiment.



The table below shows the results of his experiment.

Distance of torch from matchbox (cm)	Height of shadow on the screen (cm)
15	8
10	11
5	22

(a) Write down one variable that Ahmad kept the same in his experiment. [1]

_____

(b) What variable was measured in Ahmad's experiment? [1]

_____

(c) What is the relationship between the distance of the torch from the matchbox and the height of the shadow? [1]

_____

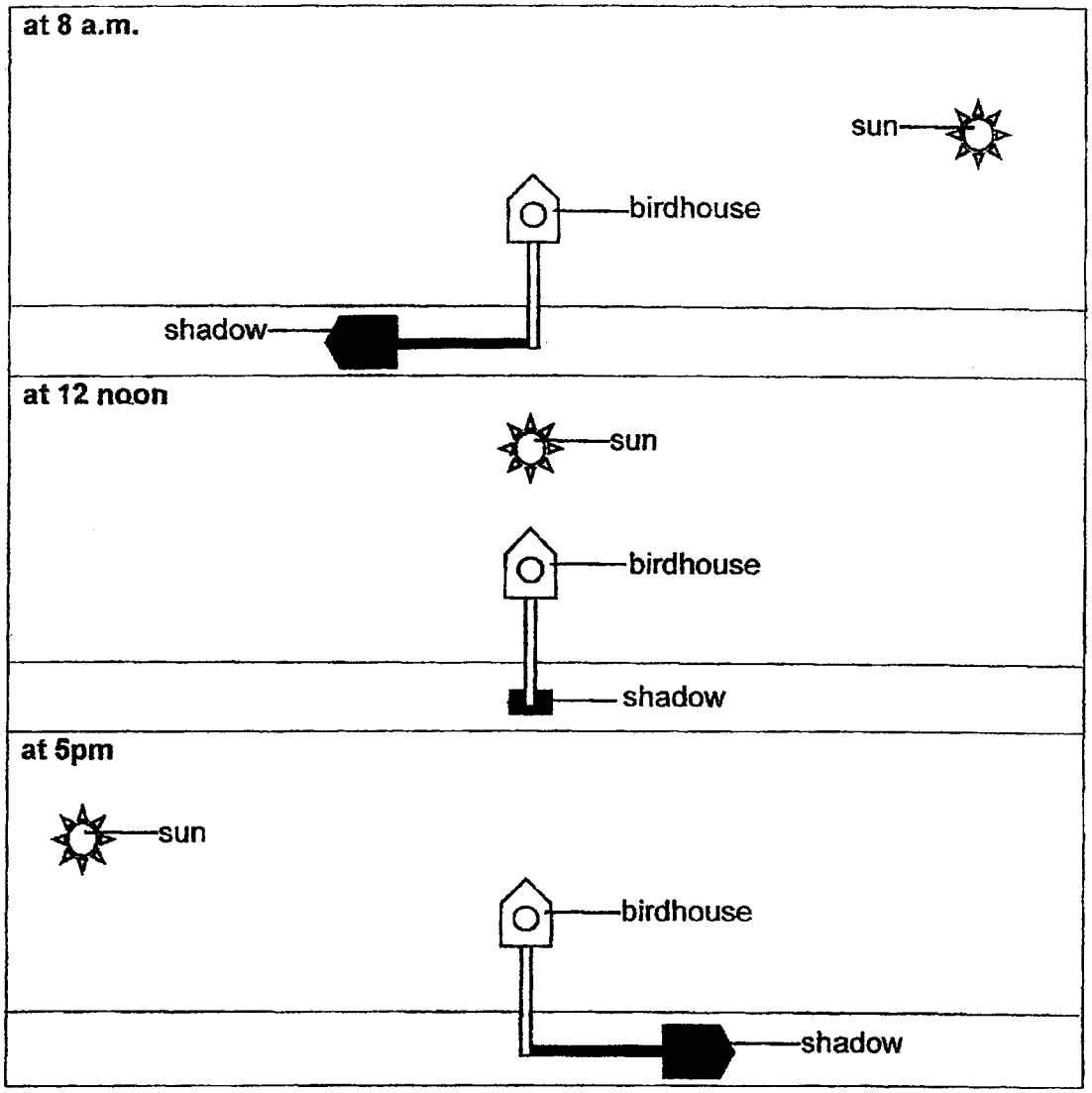
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3

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11 The diagrams below show the shadows formed by a birdhouse in Mr Kumar's garden at different times of the day.

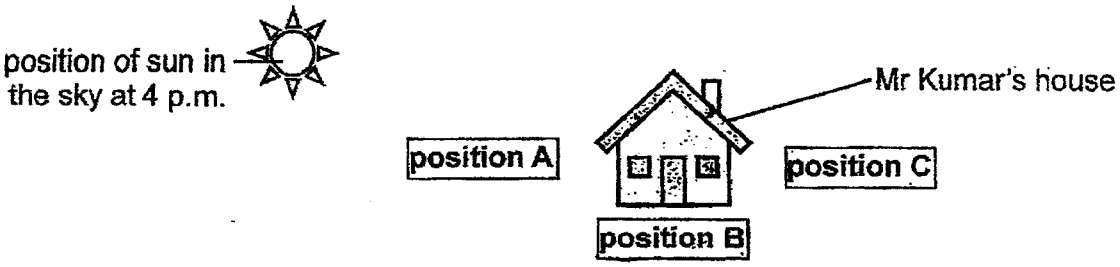


(a) Based on his observations, what can Mr Kumar conclude about how the position of the sun affects the position of the shadow formed by the birdhouse? [1]

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The diagram below shows Mr Kumar's house at 4 p.m.



(b) Based on his observations, Mr Kumar decided to plant trees to provide shade for his house from the late afternoon sun. At which position, A, B or C do you think he should plant the trees? Give a reason for your choice. [1]

_____

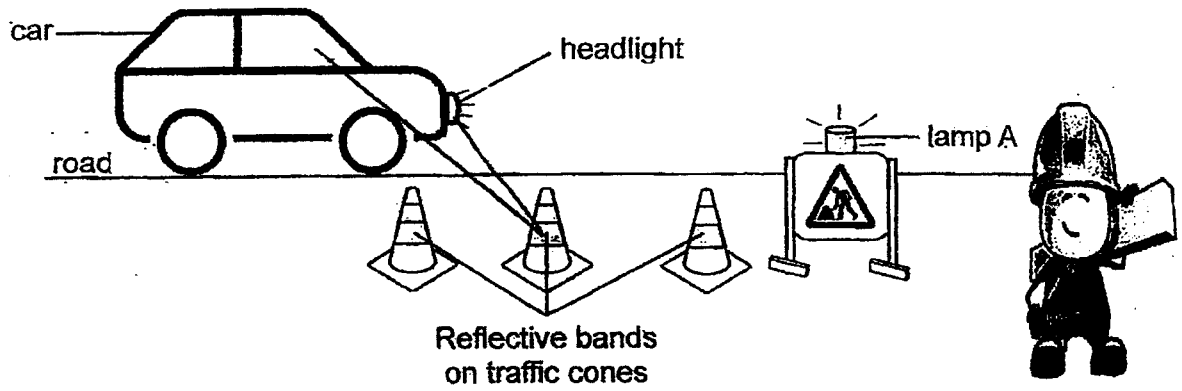
_____

2

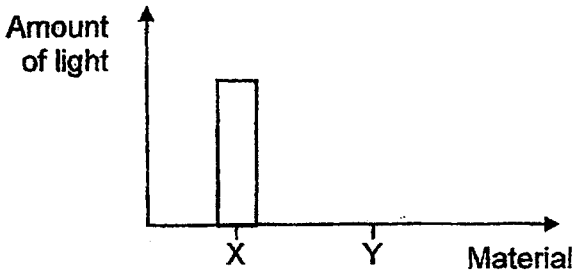
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12 The diagram shows a construction site next to a road.



Tommy tested 2 materials, X and Y, to find out how much light could pass through each of them. The bar graph below shows the results he obtained.



(a) Which of the materials, X or Y, which Tommy tested, would be suitable to make lamp A in the diagram above? Give a reason for your choice. [1]

(a) The traffic cones in the diagram above have reflective bands that make them more visible to road users at night. Explain how the reflective bands enable the traffic cones to be seen by car drivers at night. [1]

2

End of paper

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Methodist Girls' School (Primary)
P4 Science WA3 2025 Answer Key

Section A: [8 questions X 2 marks = 16 marks]

No	Answer		Answer		Answer		Answer
1	1	3	1	5	3	7	2
2	3	4	2	6	4	8	4

Section B: [4 questions - 9 marks]

Qn	Acceptable Answers
9a	
9b	Move the screen nearer/closer to the wooden block. OR Move the torch further away from the wooden block
10a	Distance between the matchbox and the screen.
10b	Height of the shadow
10c	As the distance of the torch from the matchbox decreases, the height of the shadow increases.
11a	The shadow formed is always on the opposite side of the sun.
11b	Position A because only at this position, the shadow cast by the trees on the opposite side of the sun will fall on Mr Kumar's house.
12a	Material X because it allows light to pass through it.
12b	The reflective bands reflect light from the headlights of cars into the eyes of the drivers.

END

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