Nan Hua Primary School
Primary 4 Science
Term 3 Weighted Assessment 2024

Marks	
Section A:	/10
Section B:	/10
Total:	**/20**

Name: _____( )

Class: Primary 4/_____

Date: _____

Duration: 30 minutes

Parent's Signature

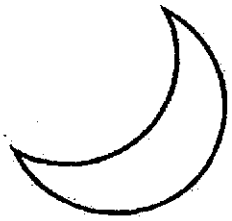
Answer all questions.

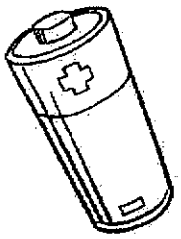
Section A: (5 x 2 marks = 10 marks)

For each question from 1 to 5, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write your answer in the brackets provided.

1 Which of the following is a source of light?

(1) 
lighted candle

(2) 
moon

(3) 
battery

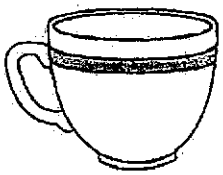
(4) 
mirror

( )

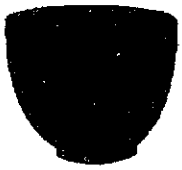
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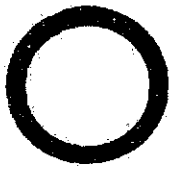
2 The diagram below shows a teacup.

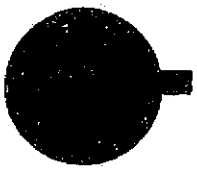


Which of the following shadows **cannot** be formed by the teacup?

(1) 

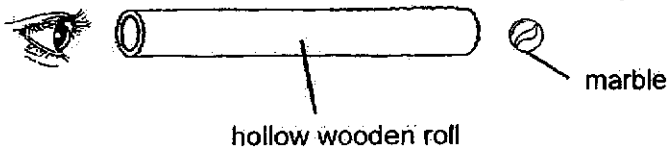
(2) 

(3) 

(4) 

( )

3 Hayley used a hollow wooden roll to look through a marble as shown in the diagram below.



Why was Hayley able to see the marble through the hollow wooden roll?

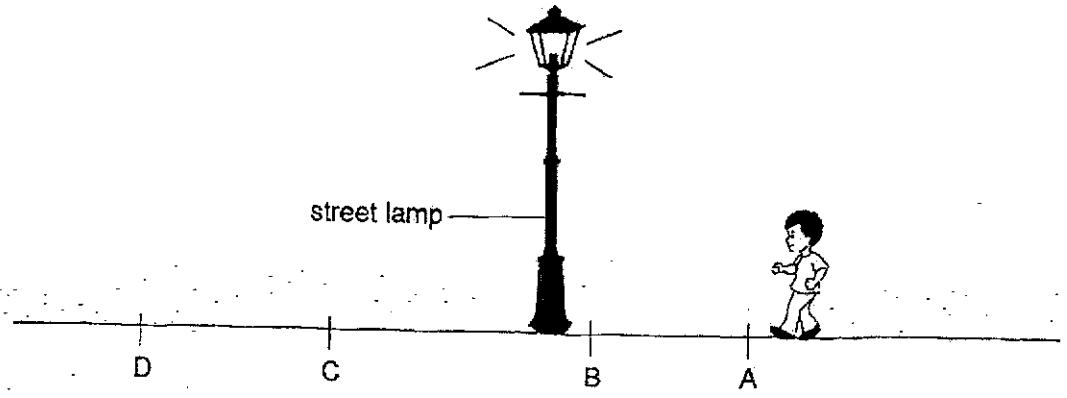
A Light is reflected away from her eye.
B Light given out by the marble enters her eye.
C Light reflected by the marble enters her eye.

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

( )

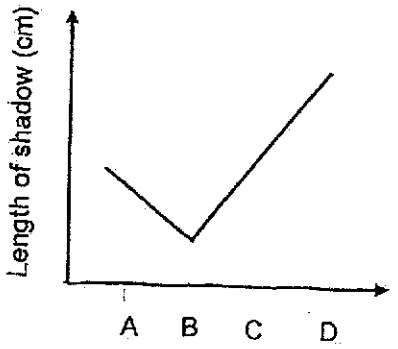
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4 The diagram below shows a boy walking on the street at night.

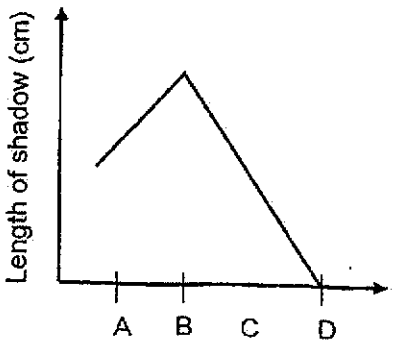


Which of the following graphs shows how the length of the boy's shadow changes from points A to D under the lit street lamp?

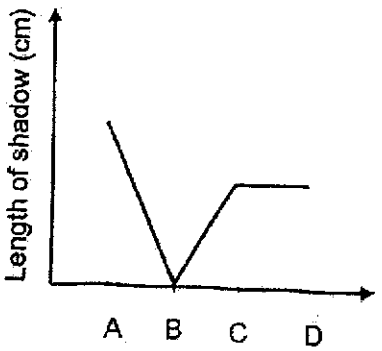
(1)



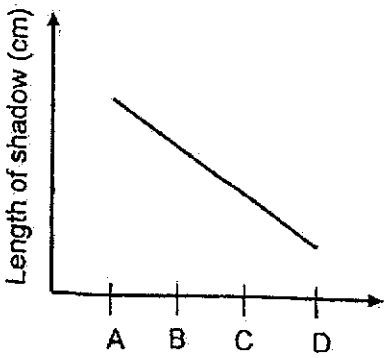
(2)



(3)



(4)

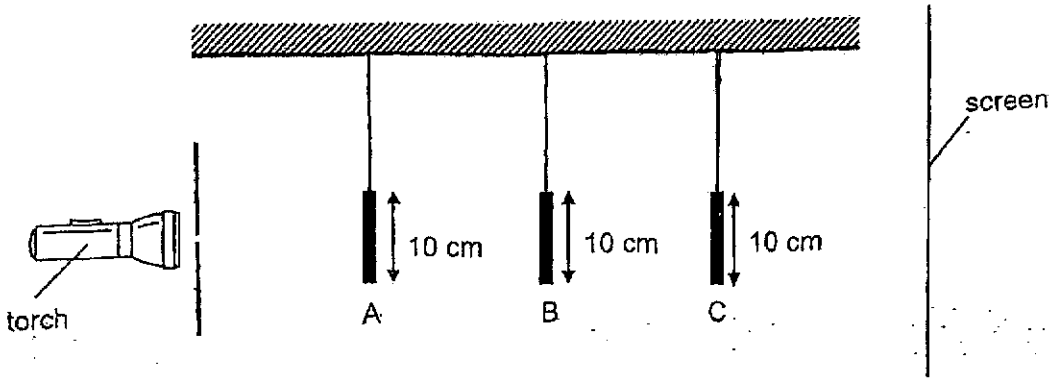


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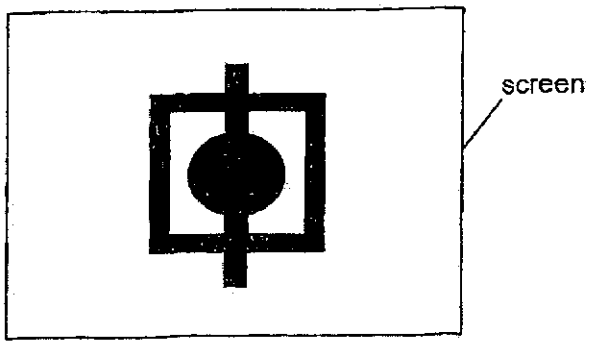
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5 The set-up below shows light shining on three wooden objects, A, B and C. They are placed at different distances from the torch.



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



What are objects A, B and C?

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

( )

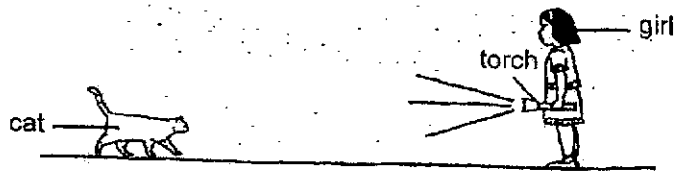
Total score for Section A	/ 10

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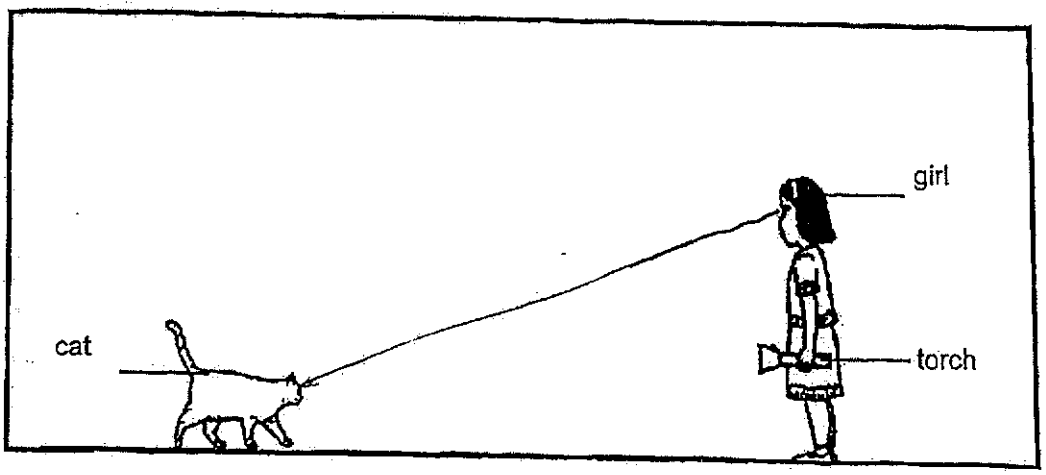
Section B: Structured questions (10 marks)

For questions 6 to 8, write your answers in the space provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

6 The diagram shows a girl using a torch to see a cat in front of her.



(a) Using a ruler and a pencil, **draw one more line and two arrows** in the diagram below to correctly show the path of light so that the girl can see the cat. [2]



(b) State a property of light that is shown from your drawing. [1]

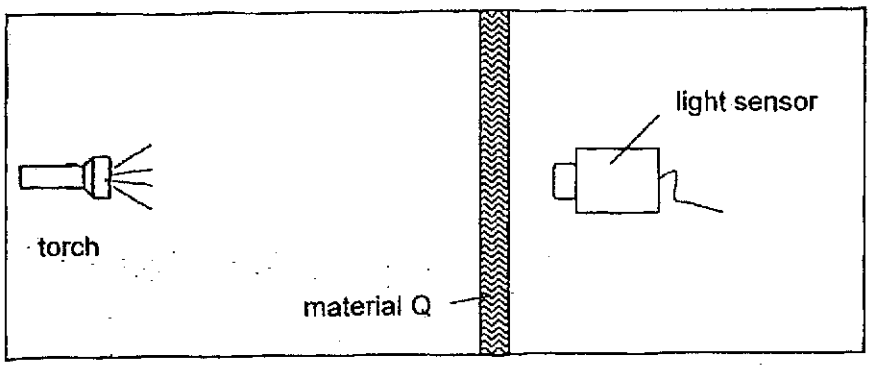
_____

_____

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7 An experiment was conducted in a dark room. The diagram below shows the set-up to find out the amount of light that can pass through two types of materials, Q and R, of the same thickness and length.



The results are shown in the table below.

Material	Amount of light detected by the light sensor (units)
Q	0
R	380

(a) State the variable to be changed in this experiment. [1]

(b) Which material, Q or R, is more suitable to make a toilet door that provides privacy for the user? Explain your answer. [2]

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Two different shapes were cut out from materials Q and R.

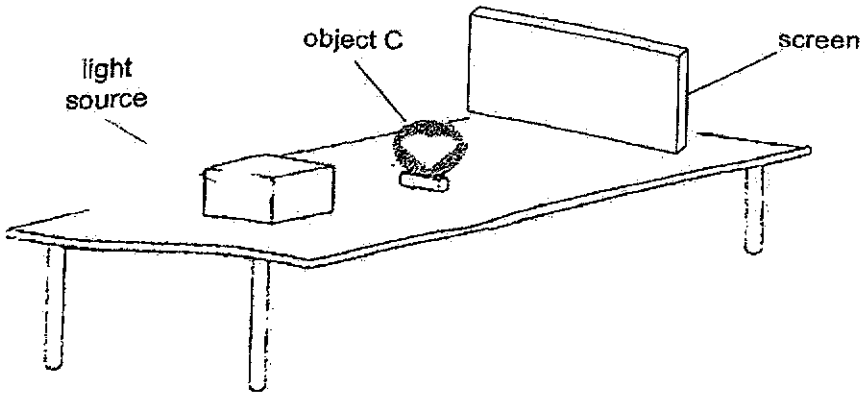


Shapes A and B were glued together to form object C as shown below.



object C

A light source was shone on object C and a shadow was formed on the screen.



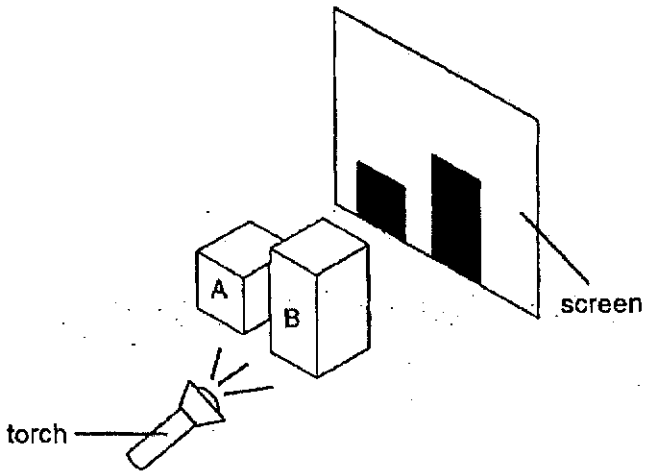
(c) Put a tick ( ) in one of the boxes below to show the shadow of object C that will be formed on the screen. [1]



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8 Marcus placed two wooden boxes of different heights, A and B, in front of a screen and shone a torch on them as shown in the diagram below.



(a) Explain how the two shadows are formed on the screen. [1]

_____

_____

(b) Moving only box A, suggest how Marcus can make the height of the shadow of box A taller than the height of the shadow of box B. [1]

_____

_____

(c) Marcus replaced the wooden boxes with boxes made of a different material. He noticed that a lighter shadow was formed. State a reason why a lighter shadow was observed. [1]

_____

_____

End of Paper

3

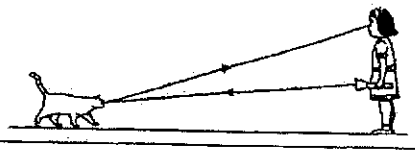
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Term 3 Weighted Assessment 2024
ANSWER KEY

Section A

Qn	Answer
1	1
2	3
3	2
4	1
5	1

Section B:

Qn	Answer
6a	
6b	Light travels in straight lines. / Light is reflected from the object into the eye.
7a	the **type** of material
7b	Ch : Material Q E : **No light** is detected by light sensor for material Q. C : Material Q is opaque. / Material Q **does not allow any light to pass through.** L : Hence, it will **ensure privacy** for the user of the toilet. / so others cannot see the user in the toilet.
7c	
8a	The shadows are formed when the **light** from the torch **is blocked by the boxes.**
8b	Move box A **closer to the torch / away from the screen.**
8c	The new boxes **allow some light to pass through/ blocks some light** thus a lighter shadow is formed. / The new boxes are made of **translucent material.**

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