Ai Tong School
P4 Science
2024 Term 3 Review

Name: _____ ( ) Class: 4 _____

Date: _____ Marks: _____ /25

Duration: 35 minutes Parent's Signature: _____

Section A (14 marks)

For each question from 1 to 7, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer in the OAS provided.

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1 Study the classification table below.

Light source	Non-light source
fire lighted torch lightning moon	mirror highlighter firefly battery

Which of the following has/have been classified **wrongly**?

(1) firefly only

(2) firefly and moon only

(3) lightning and battery only

(4) firefly and highlighter only

( )

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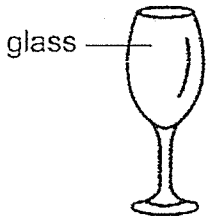
2 The diagram shows a glass.



The glass can be seen because it _____.

(1) is opaque

(2) reflects light

(3) absorbs light

(4) is a source of light

( )

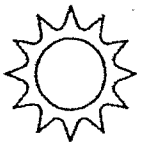
3 Which of the following is **not** a source of heat?

(1) A jacket

(2) Fire

(3) A cup of hot tea

(4) The Sun



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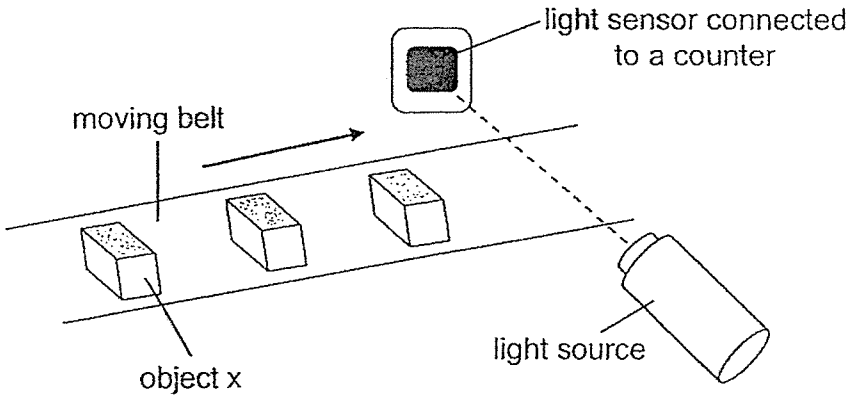
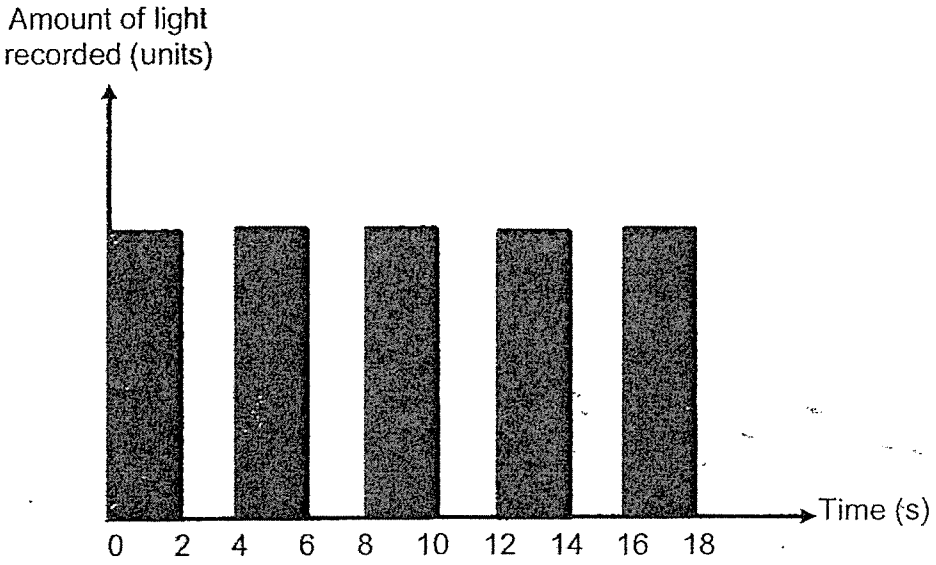
4 A light source and a light sensor are set up to count the number of object X on a moving belt.



When object X moves between the light source and the sensor, it blocks the light from reaching the sensor. The amount of light recorded over a period of time is shown in the graph below.



Based on the graph above, how many object X passed the sensor within a period of 18 seconds?

(1) 4

(2) 5

(3) 9

(4) 18

( )

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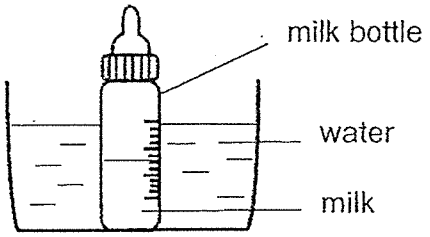
5 A bottle of milk at 30°C was placed in a basin of water as shown in the diagram below.



After two minutes, the temperature of the milk became 50°C.
What was the likely temperature of the water in the basin at first?

(1) 10°C

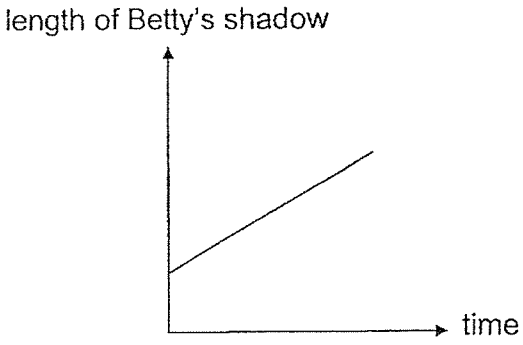
(2) 30°C

(3) 50°C

(4) 80°C

( ).

6 In the experiment, Mary measured the length of Betty's shadow from a lighted lamp post over a period of time. Her results are shown below.



Which of the following describes the position of Betty during the experiment?

(1) Betty stood still near the lamp post.

(2) Betty moved towards the lamp post.

(3) Betty moved away from the lamp post.

(4) Betty moved towards then moved away from the lamp post.

( ).

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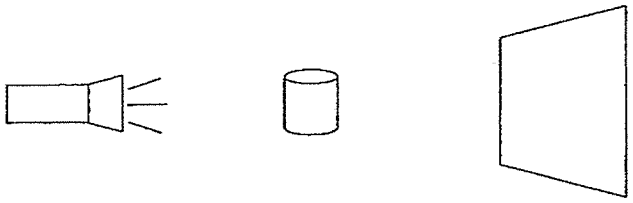
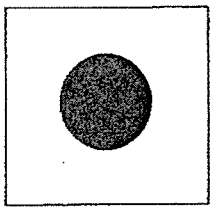
7 The set-up below shows a torch shining on a wooden block.



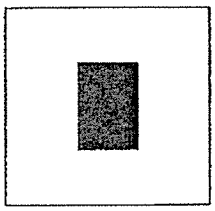
torch wooden block screen

Which one of the following would likely be seen on the screen?

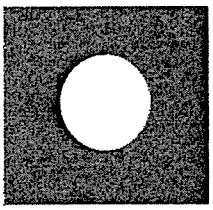
(1)



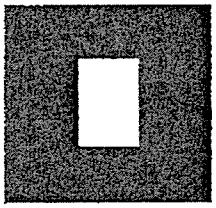
(2)



(3)



(4)



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Section B (11 marks)

For questions 8 to 11, write your answers in the spaces provided.
The number of marks available is shown in bracket [ ] at the end of each question or part question.

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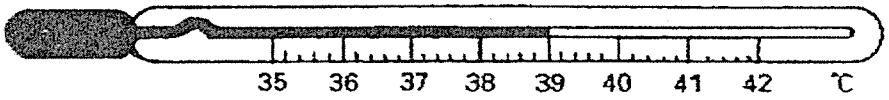
8 John was running a fever so he used the instrument below to measure his body temperature.



(a) State the reading shown in the instrument. [1]

_____

(b) Name the instrument used to measure his body temperature. [1]

_____

(c) John placed a cold and wet towel on his forehead for fifteen minutes. What would happen to his body temperature? Explain your answer. [2]

_____

_____

_____

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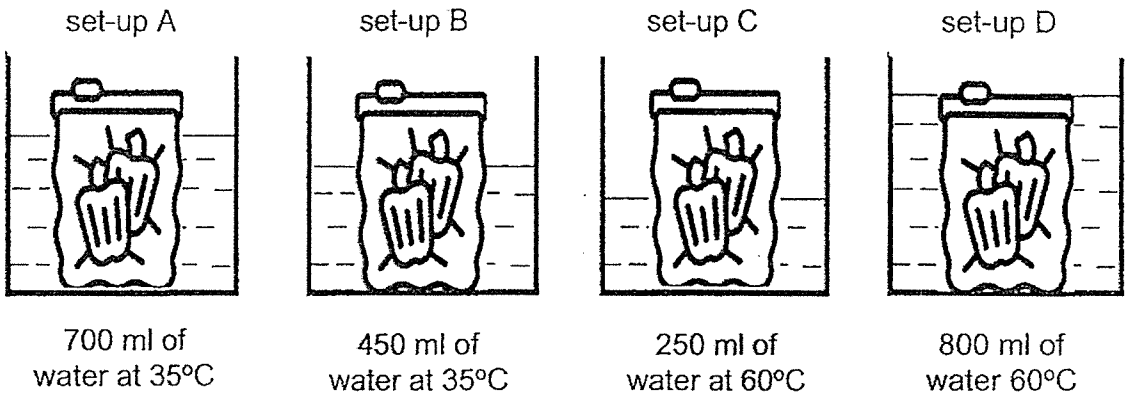
4

9 Mike conducted an experiment as shown below to find out how he could defrost a packet of frozen vegetables in the shortest time. He placed four similar packets of frozen vegetables into four similar containers containing different volumes of water at different temperatures.



Which set-up, A, B, C or D, should Mike use if he wants the frozen vegetables to defrost in the shortest time? Explain your answer. [2]

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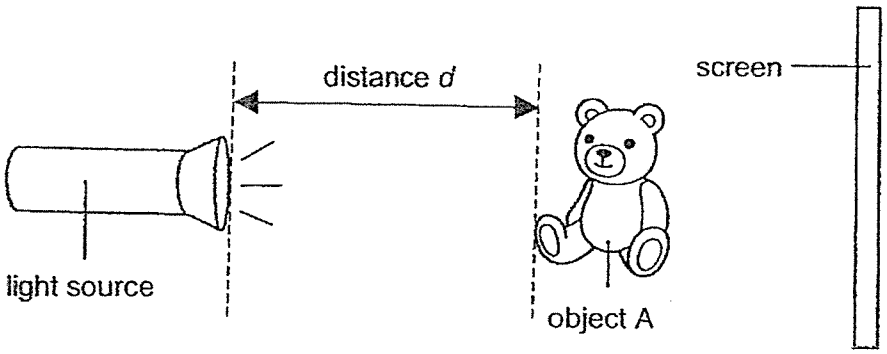
2

10 Mandy wanted to find out how the distance *d* would affect the height of the shadow of object A on the screen. When she switched on the torch, a dark shadow of object A was formed on the screen. The position of the screen is fixed throughout the experiment.



She recorded the results in the table below.

Distance *d* (cm)	Height of shadow (cm)
5	20
10	16
15	10

(a) What is the relationship between the distance *d* and the height of the shadow?

[1]

(b) If Mandy sets distance *d* as 8cm, predict the height of the shadow formed on the screen.

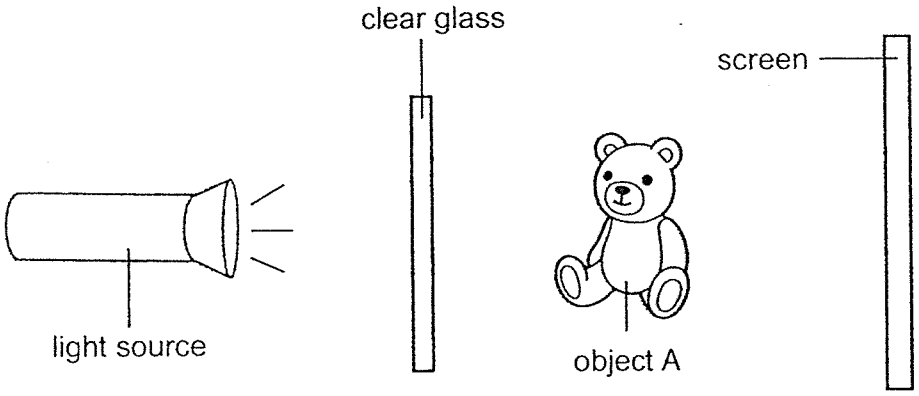
[1]

Question 10 continues on the next page ...

2

Question 10 continues on this page ...

Without making any changes to the set-up, Mandy placed a large piece of clear glass between the light source and object A.



(c) Mandy observed that a dark shadow was also formed on the screen.
Explain her observation. [1]

_____

_____

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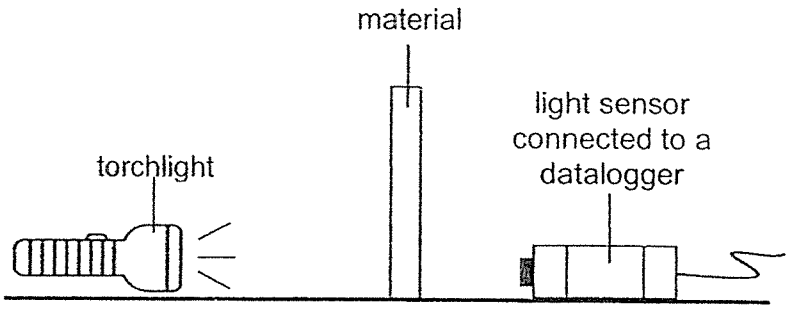
1

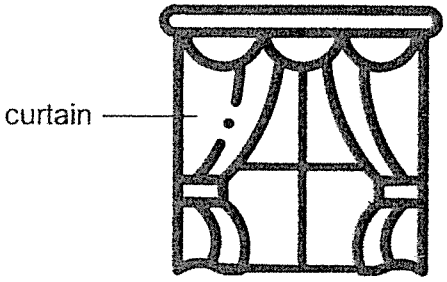
11 Different materials are placed one at a time between a torch and a light sensor connected to a datalogger. The amount of light passing through each material was recorded.



The table below shows the readings recorded.

Material	Amount of light recorded (unit)
A	840
B	100
C	3175
D	2460

Dan wanted to install curtains on his windows to block out as much light as possible.



Based on the experiment, which material, A, B, C or D, is most suitable to be used for making the curtains? Explain your answer. [2]

_____

_____

_____

End of Paper

2

ANSWER KEY

YEAR : 2024
LEVEL : PRIMARY 4
SCHOOL : AI TONG
SUBJECT : SCIENCE
TERM : WA 3

SECTION A

Q1	2	Q2	2	Q3	1	Q4	1	Q5	4
Q6	3	Q7	2						

SECTION B

Q8	a) 39° b) Thermometer c) His body temperature will decrease. His body lost heat to the cold towel.
Q9	Choice : set-up D Data : Container set-up D contains the most water at a higher temperature. Explain : so most heat will transfer from the water to frozen vegetables to defrost it.
Q10	a) As distance D increases , the height of shadow decreases. b) 17cm – 19cm c) The clear glass is transparent / allows all / most light to pass through it.
Q11	Choice : material B Data : Amount of light recorded is the least Explain : B can block out most amount of light / B is the least transparent.

END