Practice Questions

UNSW
THE UNIVERSITY OF NEW SOUTH WALES

eaa
EDUCATIONAL ASSESSMENT AUSTRALIA

INTERNATIONAL COMPETITIONS AND ASSESSMENTS FOR SCHOOLS

MATHEMATICS

STUDENT'S NAME:

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.

Read the instructions on the **ANSWER SHEET** and fill in your **NAME**, **SCHOOL** and **OTHER INFORMATION**.
Use a 2B or B pencil.
Do **NOT** use a pen.
Rub out any mistakes completely.

You **MUST** record your answers on the **ANSWER SHEET**.

There are **3 MULTIPLE-CHOICE QUESTIONS** (1–3).
Use the information provided to choose the **BEST** answer from the four possible options.
On your **ANSWER SHEET** fill in the oval that matches your answer.

There is **ONE FREE-RESPONSE QUESTION** (4).
Write your answer in the box provided on the **ANSWER SHEET**.

Your score will be the number of correct answers.
Marks are **NOT** deducted for incorrect answers.

You may use a ruler and spare paper.
You are **NOT** allowed to use a calculator.

PLEASE SEE BACK COVER FOR A LIST OF THE YEAR LEVELS THAT SHOULD SIT THIS PAPER

PAPER E

INTERNATIONAL COMPETITIONS AND ASSESSMENTS FOR SCHOOLS

MATHEMATICS

UNSW THE UNIVERSITY OF NEW SOUTH WALES

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HOW TO FILL OUT THIS SHEET: USE 2B OR B PENCIL

- Use 2B or B pencil only.
- Rub out all mistakes completely.
- Print your details clearly in the boxes provided.
- Make sure you fill in only one oval in each column.

EXAMPLE 1: Debbie Bach

FAMILY NAME: BACH

GIVEN NAME: DEBBIE

EXAMPLE 2: Fahrul Asmady bin Abas

FAMILY NAME: ABAS

GIVEN NAME: FAHRUL ASMADY BIN

FAMILY NAME

GIVEN NAME

Are you Male or Female?

○ Male ○ Female

Does anyone in your home usually speak a language other than English?

○ Yes ○ No

What is your date of birth?

Day	Month	Year
0 1 2 3	0 1	0 1 2 3 4 5 6 7 8 9

CLASS (Optional)

A B C D E F G H I J K L M N O P

TAP I.D. (TAP Schools only) ____ – ____ – ____

School Name: _____

Town / Suburb: _____

Today's Date: ___/___/___ **Postcode:** _____

TO ANSWER THE QUESTIONS

MULTIPLE CHOICE
Questions 1 to 3.

Example: 4 + 6 = ?

(A) 2
(B) 9
(C) 10
(D) 24

The answer is 10, so fill in the oval Ⓒ as shown.

Ⓐ Ⓑ ● Ⓓ

FREE RESPONSE
Question 4.

Example: 6 + 6 = ?

- The answer is 12, so WRITE your answer in the boxes.
- Write only ONE digit in each box as shown.

	1	2

START

1 Ⓐ Ⓑ Ⓒ Ⓓ

2 Ⓐ Ⓑ Ⓒ Ⓓ

3 Ⓐ Ⓑ Ⓒ Ⓓ

4 ☐☐☐

INTERNATIONAL COMPETITIONS AND ASSESSMENTS FOR SCHOOLS
MATHEMATICS

PAPER E

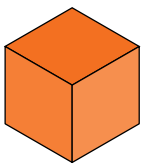
1. The table shows the year that three types of buses started running in London.

Type of Bus	Started running in London
Steam Bus	1833
Electric Bus	1897
Petrol–Engine Bus	1899

For how many years were steam buses running in London before electric buses started running in London?

(A) 130
(B) 97
(C) 66
(D) 64

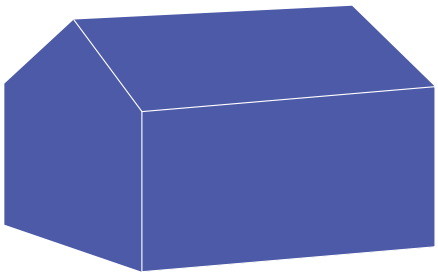
2. A cube has a volume of 343 cm^3.



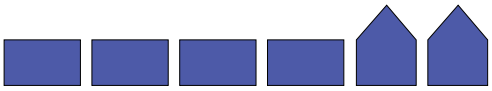
What is the sum of the lengths of the edges of the cube?

(A) 7 cm
(B) 56 cm
(C) 84 cm
(D) 294 cm

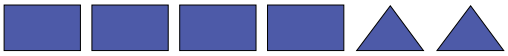
3. Lyn built a model of a shed. It had no floor and no door. It looked like this when it was finished.



Which of the following shows the shapes that Lyn used to build the shed?

(A) 

(B) 

(C) 

(D) 

4. Ron and Angela carry 1300 books from the library. Ron works for 15 days and Angela works for 10 days.

They both work at different rates. Over the same period of time, Ron carries 4 books to every 7 books that Angela carries.

How many books does Ron carry altogether?

(Write only the number on your answer sheet.)

END OF PAPER

THE FOLLOWING YEAR LEVELS SHOULD SIT FOR THIS PAPER:

AUSTRALIA: Year 7
BRUNEI: Form 1
INDONESIA: Year 8
MALAYSIA: Form 1
NEW ZEALAND: Year 8
PACIFIC: Year 7
SINGAPORE: Primary 6
SOUTH AFRICA: Grade 7

Question solutions–Paper E

Question 1

Answer key: D
Category: Chance and data

Options	*Reasoning for options*
A 130	Incorrect
B 97	Incorrect
C 66	Incorrect
D 64	Correct 1897 - 1833 = 64

Difficulty level: Easy. About 80-100% expected correct.

Question 2

Answer key: C
Category: Measurement

Options	*Reasoning for options*
A 7 cm	Incorrect. This is length of one edge only.
B 56 cm	Incorrect. Not all edges have been included.
C 84 cm	Correct. If a cube has a volume of 343 cm then its edge length is 7 cm. There are 12 edges on a cube, so the total length of the edges is 7 x 12 = 84
D 294 cm	Incorrect. This is the surface area of the cube, not the length of the edges.

Difficulty level: Hard. Less than 31% expected correct.

Question 3

Answer key: A
Category: Measurement

Options	*Reasoning for options*
A	Correctly recognises 2D faces of 3D figure
B	Incorrect
C	Incorrect
D	Incorrect

Difficulty level: Medium. About 31-79% expected correct.

Question 4

Answer key: 600
Category: Space

Reasoning

If Angela carries x number of books per day, Ron carries $\frac{4}{7}x$ books per day.

Total carried by Ron in 15 days = $15 \times \frac{4}{7}x$
Total carried by Angela in 10 days = $10x$
Total of all books carried = 1300

So $15 \times \frac{4}{7}x + 10x = 1300$
$x = 70$ $\therefore$ So Angela carries $10x$ or 700 books.

Number of books Ron carries = 1300 – 700 = 600 books

Difficulty level: Hard. Less than 30% expected correct.
