

Practice
Questions



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

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.

- (A) (B) (C) (D)

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
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START

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4

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INTERNATIONAL COMPETITIONS AND ASSESSMENTS FOR SCHOOLS MATHEMATICS

Your privacy is assured as EAA fully complies with appropriate Australian privacy legislation. Visit www.eaa.unsw.edu.au for more details.



1. Here is a number pattern.

$$3 \times 37 = 111$$

$$6 \times 37 = 222$$

$$9 \times 37 = 333$$

Which of these will give 888?

- (A) 24×37
- (B) 20×37
- (C) 12×37
- (D) 8×37

2. Alice wants to build a fence around her rectangular guinea pig pen.



NOT TO SCALE

She has 360 cm of fencing.

What width will give the largest area?

- (A) 120 cm
- (B) 90 cm
- (C) 80 cm
- (D) 30 cm

3. Maria glued some cubic blocks together to make three separate solids. These three solids fit together to make a larger cube.

Which of these is **not** one of Maria's solids?



(A)



(B)

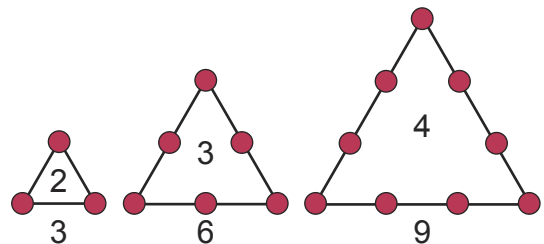


(C)



(D)

4. Here is the start of a pattern.



The number below each triangle gives the total number of dots on the triangle.

The number inside the triangle gives the number of dots on each side of the triangle.

When the total number of dots on a triangle in this pattern is 72, how many dots are there on each of its sides?

(Write only the number on your answer sheet.)

END OF PAPER

**THE FOLLOWING YEAR LEVELS
SHOULD SIT FOR THIS PAPER:**

AUSTRALIA: Year 6
BRUNEI: Primary 6
INDONESIA: Year 7
MALAYSIA: Standard 6
NEW ZEALAND: Year 7
PACIFIC: Year 6
SINGAPORE: Primary 5
SOUTH AFRICA: Grade 6



Question solutions–Paper D

Question 1

Answer Key: A
Category: Number

Options	Reasoning for options
A 24×37	Correct. 8th multiple of 3 will satisfy the pattern
B 20×37	Incorrect
C 12×37	Incorrect
D 8×37	Incorrect

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

Question 2

Answer key: B
Category: Measurement

Options	Reasoning for options
A 120 cm	Incorrect guess. If the width of the pen was 120 cm, then the length would be 60 cm. $60 \times 120 = 7\,200 \text{ cm}^2$
B 90 cm	Correct. If the width of the pen was 90 cm then the length would be 90 cm also. $90 \times 90 = 8\,100 \text{ cm}^2$
C 80 cm	Incorrect guess. If the width of the pen was 80 cm, then the length would be 100 cm. $80 \times 100 = 8\,000 \text{ cm}^2$
D 30 cm	Incorrect guess. If the width was 30 cm, then the length would be 150 cm. $150 \times 30 = 4\,500 \text{ cm}^2$

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

Question 3

Answer key: A
Category: Space

A	Correct. Picture (A) has 8 blocks. Picture (B) and (C) have 11 blocks. Picture (D) has 5 blocks. The blocks add up $11 + 11 + 5 = 27$ blocks. This is the number in a $3 \times 3 \times 3$ cube. Also the largest number of blocks in a row is 3 to give another clue to the size of the cube. So the (A) with 8 blocks cannot be part of the bigger cube.
B	Incorrect guess.
C	Incorrect guess.
D	Incorrect guess.

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

Question 4

Answer Key: 25
Category: Number

Reasoning

To solve this, find the pattern then test it on the examples given.

$$\begin{aligned}\text{Number of dots on each side} &= \text{total number of dots} \div 3 + 1 \\ &= 72 \div 3 + 1 \\ &= 25\end{aligned}$$

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