





PRACTICE QUESTIONS



Mathematics

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 pencil. Do NOT use a coloured pencil or a pen. Rub out any mistakes completely.

You MUST record your answers on the ANSWER SHEET.

Mark only **ONE** answer for each question.

Your score will be the number of correct answers.

Marks are NOT deducted for incorrect answers.

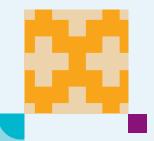
There are 5 MULTIPLE-CHOICE QUESTIONS (1-5).

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.

You may use a ruler and spare paper.

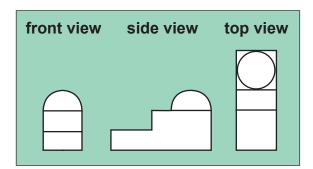
You are **NOT** allowed to use a calculator.



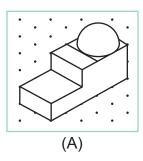
Note: Some UNSW Global assessments are only available online.

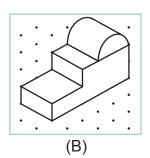


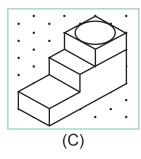
1. The plans for a new school hall are on display. These plans show a front view, a side view and a top view of the hall.

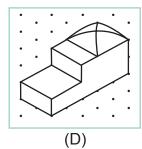


Which of the diagrams shows a correct three-dimensional view of the new hall?

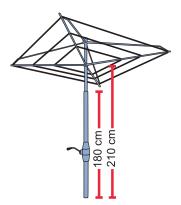








2. A rotary clothes line is 180 cm from the ground at its lowest level and 210 cm when it is at its highest.



When the handle is given one full turn, the height of the clothes line increases by 30 mm.

How many full turns of the handle will it take to raise the clothes line from its lowest to its highest level?

- (A) 10
- (B) 30
- (C) 100
- (D) 300
- 3. Henry made a pattern with blocks, as shown.

Stage	Picture
1	
2	
3	
4	

In Stage 2 Henry used a total of five blocks.

How many blocks does Henry need for Stage 5?

(A) 16

(B) 17

- (C) 18
- (D) 21

4. Sandra has these pictures on her website.



Picture 1 uses 7.25 KB of memory.



Picture 2 uses 3.323 KB of memory.

Approximately how much memory does Picture 2 use as a percentage of the memory used by Picture 1?

- (A) 54%
- (B) 46%
- (C) 43%
- (D) 39%

* Free response questions are only applicable to some assessments.

QUESTION 5 IS FREE RESPONSE.

Write your answer in the boxes provided on the ANSWER SHEET and fill in the ovals that match your answer.

5.* Lin cut this square picture out of a magazine.



She made an enlarged copy that was still square but twice as wide.



Lin cut off a rectangle from the right of the picture.



The picture was now a rectangle whose width was $\frac{2}{3}$ of the height.

She then doubled the width of the picture.



The area of the rectangle was now 139 968 mm².

How high, in mm, was the original picture?

END OF PAPER

THIS PAGE MAY BE USED FOR WORKING.	

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⊕ REACH ASSESSMENTS™





HOW TO FILL OUT THIS SHEET: USE A PENCIL

- · Print your details clearly in the boxes provided.
- · Make sure you fill in only one oval in each column.

Are you male or female?

- · Rub out all mistakes completely.
- · Do not use a coloured pencil or pen.

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TO ANSWER THE QUESTIONS

MULTIPLE CHOICE

Questions 1 to 35

Example: 4 + 6 =

(A) 2

(B) 9

(C) 10

(D) 24

D

The answer is <u>10</u>, so fill in the oval <u>o</u>, as shown.



START

B

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QUESTION	KEY	SOLUTION	STRAND	LEVEL OF DIFFICULTY
1	A	Option A correctly matches the front, side and top views. Option B does not match the front view or the top view. Option C does not match the front view or the side view. Option D does not match any view.	Space and Geometry	Easy
2	A	The difference between the clothes line highest and lowest level is $210 - 180 = 30$ cm Convert this to mm is $30 \times 10 = 300$ mm. One full turn of the handle increases the height by 30 mm; therefore we need to divide 300 by 30 which equals 10. It will take 10 full turns of the handle to raise the clothes line from its lowest to its highest level.	Measurement	Easy
3	В	The number of blocks used in the stages shows a pattern: 1, 5, 9, 13 The pattern is continued by adding four blocks to the previous term. So Stage 5 will contain 13 + 4 = 17 blocks.	Algebra and Patterns	Medium
4	В	3.323 KB as a percentage of 7.25 KB is calculated as $(3.323 \div 7.25) \times 100\% = 45.83427\%$. This is 46% when rounded up.	Number and Arithmetic	Medium
5	162	Let x be the side length of the original picture. After the first transformation, the picture is still a square, but now with a side length of $2x$. After cutting off a rectangle from the right of the picture, the picture is now a rectangle with height $2x$ and width $\frac{2}{3}$ of $2x$ which equals $\frac{4}{3}x$. After the final transformation, the width is doubled, $\frac{8}{3}x$, but the height stays the same, $2x$. The area of the picture is now 139 968 mm². Hence, $2x \times \frac{8x}{3} = 139 968$ $x^2 = \frac{139 968 \times 3}{16}$ $x = \sqrt{26 244}$ $x = 162$	Number and Arithmetic	Hard

Level of difficulty refers to the expected level of difficulty for the question.

Easy more than 70% of candidates will choose the correct option

Medium about 50–70% of candidates will choose the correct option

Medium/Hard about 30–50% of candidates will choose the correct option

Hard less than 30% of candidates will choose the correct option

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THE FOLLOWING YEAR LEVELS SHOULD SIT THIS PAPER Australia¹ Year 9 **Brunei** Form 4 **Egypt** Year 9 **Hong Kong** Form 3 Indian Subcontinent² Class 9 Indonesia Year 10 Form 3 Malaysia Middle East³ Class 9 Year 10 New Zealand/ Pacific4 Secondary 2 **Singapore** Southern Africa5 Grade 9



- All international schools registered with UNSW Global (which have an 8-digit school code starting with 46) should sit the papers according to the Australian year levels.
- Indian Subcontinent Region: India, Sri Lanka, Nepal, Bhutan and Bangladesh.
 Middle East Region: United Arab Emirates, Qatar, Kuwait, Saudi
- Middle East Region: United Arab Emirates, Qatar, Kuwait, Saudi Arabia, Bahrain, Oman, Turkey, Lebanon, Tunisia, Morocco, Libya, Algeria, Jordan and Pakistan.
- 4 Pacific Region: Vanuatu, Papua New Guinea and Fiji.
- 5 Southern Africa Region: South Africa, Botswana, Lesotho, Swaziland, Zimbabwe and Namibia.



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