

THE UNIVERSITY OF NEW SOUTH WALES


## 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 $\mathbf{3}$ 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.
A CALCULATOR is required.

HOW TO FILL OUT THIS SHEET:
<\} USEI2B OR BPPENCIL \{

- 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.



## 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

TAP I.D. (TAP Schools only) $\square$ - $\square$ $-$ $\square$

## 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

## 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.

The answer is 10, so fill in the oval (c) as shown.


## START

$\square$

## INTERNATIONALCOMPETITIONS <br> AND ASSESSMENTS FOR SCHOOLS

1. Alan uses this spinner in a game.


On which symbol is the arrow most likely to stop?

(A)

(B)

(C)

(D)
2. A snail travelled 1.5 metres in 4 hours.


If the snail continued at the same speed, how far would it travel in 160 minutes?
(A) 60 cm
(B) 100 cm
(C) 150 cm
(D) 600 cm
3. Here is the first unit in a pattern of shapes.



To make the next unit of the pattern, each shape is rotated about its centre as indicated in the table.

| Shape | Direction of <br> rotation | Amount of <br> rotation |
| :---: | :---: | :---: |
| Circle | anticlockwise <br> (to left) | $120^{\circ}$ |
| Square | clockwise <br> (to right) | $45^{\circ}$ |
| Equilateral <br> triangle | clockwise <br> (to right) | $60^{\circ}$ |

What is the third unit in this pattern?
(A)


(B)



(C)



(D)

$\square$

4. This is how the ancient Egyptians wrote a particular fraction.


The symbol has been used in this equation.

$$
1 \frac{11}{15}-\left\{\times \frac{2}{3}=1 \frac{2}{3}\right.
$$

What is the smallest positive number that could be the denominator of the fraction (the number that would go on the BOTTOM of the fraction)?
(Write only the number on your answer sheet.)

## END OF PAPER

THE FOLLOWING YEAR LEVELS SHOULD SIT FOR THIS PAPER:

AUSTRALIA: Year 8 BRUNE: Form 2\& 3 INDONESIA: Year 9 MALAYSIA: Form 2 NEW ZFALAND: Year 9 PACIFIC: Year 8 SINGAPORE: Sec 1 SOUTH AFRICAF Grade 8
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## Question solutions-Paper F

## Question 1

| Answer key: | A |
| :--- | :--- |
| Category: | Chance and data |
| Options | Reasoning for options <br> Correct. The arrow will be most likely to stop on the symbol with the <br> Areatest frequency |
| B | Incorrect. Star occurs less frequently than arrow. <br> Incorrect. Snowflake occurs infrequently. <br> C |
| Incorrect. Sun occurs infrequently. |  |

## Question 2

| Answer key: | C |
| :---: | :---: |
| Category: | Number |
| Options | Reasoning for options |
| A 60 | Incorrect |
| B 100 | Correct. Convert hours to minutes and m to cm first. |
|  | Distance travelled in $1 \mathrm{~min} \quad=\frac{150}{240} \mathrm{~cm}$ |
|  | Distance travelled in $160 \mathrm{~min}=\frac{150}{240} \times 160 \mathrm{~cm}$ |
|  | $=100 \mathrm{~cm}$ |
| C 150 | Incorrect |
| D 600 | Incorrect |
| Difficulty level: | Medium. About 31-79\% expected correct. |

## Question 3

| Answer key: | A |
| :--- | :--- |
| Category: | Space |

Options Reasoning for options
A
Correct.
B Incorrect. Does each operation once and there are three operations
C Incorrect. This is the $4^{\text {th }}$ unit of the pattern NOT the $3^{\text {rd }}$ unit as requested.
D Incorrect. $1^{\text {st }}$ correct, $2^{\text {nd }}$ and $3^{\text {rd }}$ shapes incorrect
Difficulty level: Hard. Less than $31 \%$ expected correct.

## Question 4

| Answer key: | 10 |
| :--- | :--- |
| Category: | Number |

## Reasoning

Solve equation: Change all to $\frac{1}{15}$ th. Make sure with order of operation you multiply first. The value of the symbol is $\frac{1}{10}$, with the denominator being 10 .

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

