

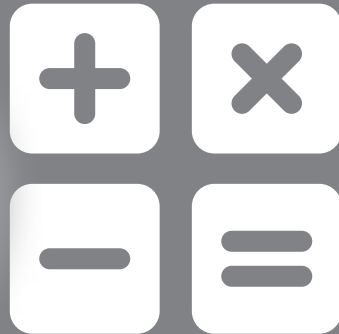


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PAPER
F

Practice
Questions



ICAS International
Competitions
and Assessments
for Schools

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.

STUDENT'S NAME:

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**.

MATHEMATICS

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

Your score will be the number of correct answers.

Marks are **NOT** deducted for incorrect answers.

MULTIPLE-CHOICE QUESTIONS:

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.

FREE-RESPONSE QUESTIONS:

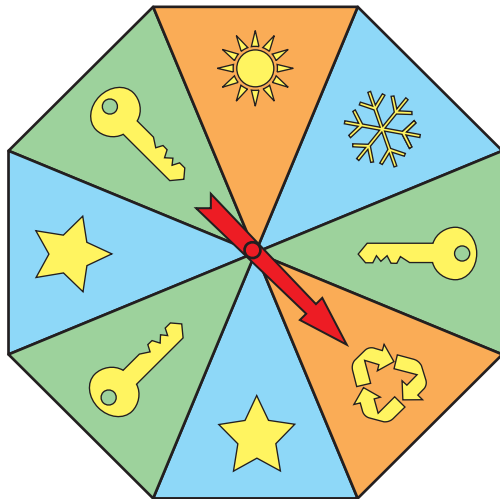
Write your answer in the boxes provided on the **ANSWER SHEET** and fill in the oval that matches your answer

You may use a ruler and spare paper.

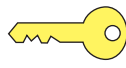
A **CALCULATOR** is required.

Educational
Assessment

1. Alan uses this spinner in a game.



On which symbol is the arrow most likely to stop?

- 

(A)



(B)

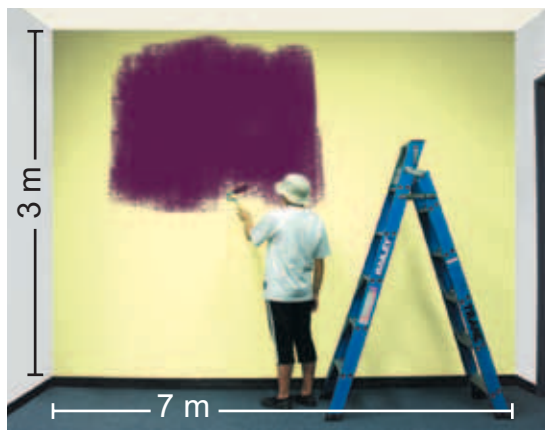


(C)



(D)

2. Fran's father has agreed to pay her \$1.50 per square metre for painting the wall shown.



How much will Fran be paid when she finishes painting the whole wall?

- (A) \$10.50
- (B) \$14.00
- (C) \$31.50
- (D) \$42.00

3. This picture shows an airport departure screen.

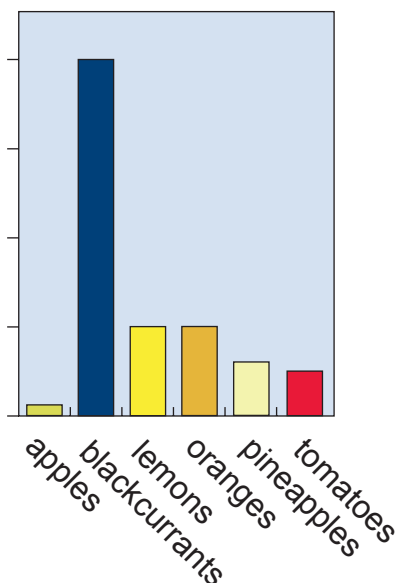
Time	Flight Number	Destination	Gate
13:00	F973	London	R
13:25	F613	Singapore	S
13:35	F023	Hong Kong	R
13:45	F255	New York	S
13:50	F340	Paris	R
13:50	F812	Auckland	S

Which flight leaves 15 minutes before the Paris flight?

- (A) F023
- (B) F812
- (C) F613
- (D) F973

4. Mary drew this graph to show the amount of Vitamin C in some different types of food. She did not complete the vertical scale.

Natural Sources of Vitamin C



Which of these tables could be correct for Mary's graph?

Food	Vitamin C
apples	6
blackcurrants	50
lemons	50
oranges	50
pineapples	30
tomatoes	25

(A)

Food	Vitamin C
apples	6
blackcurrants	100
lemons	50
oranges	50
pineapples	30
tomatoes	50

(B)

Food	Vitamin C
apples	6
blackcurrants	200
lemons	50
oranges	50
pineapples	30
tomatoes	50

(C)

Food	Vitamin C
apples	6
blackcurrants	200
lemons	50
oranges	50
pineapples	30
tomatoes	25

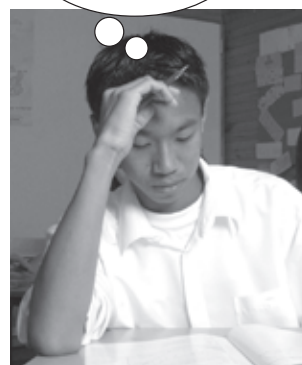
(D)

QUESTION 5 IS FREE TO USE.

Write your answer in the boxes on the ANSWER SHEET and fill in the at match your answer.

5. Ricky is thinking of a positive 3-digit number.

'If I subtract 9 from the number, the result will be divisible by 9.
If I subtract 10 from the number, the result will be divisible by 10.
If I subtract 11 from the number, the result will be divisible by 11.'



What is the lowest possible number Ricky is thinking of?

Acknowledgment

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The following year levels should sit THIS Paper:

Australia	Year 8
Brunei	Form 2 & 3
Hong Kong	Form 2
Indonesia	Year 9
Malaysia	Form 2
New Zealand	Year 9
Pacific	Year 8
Singapore	Secondary 1
South Africa	Grade 8



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

FIRST NAME

D	E	B	B	I	E
○	○	○	○	○	○
(A)	(A)	(A)	(A)	(A)	(A)
(B)	(B)	●	●	(B)	(F)
(C)	(C)	(C)	(C)	(C)	(C)
(D)	(D)	(D)	(D)	(D)	(D)

LAST NAME

B	A	C	H
○	○	○	○
(A)	●	(A)	(A)
●	(B)	(B)	(F)
(C)	(C)	●	(C)
(D)	(D)	(D)	(D)

FIRST NAME	LAST NAME
C H A N	A I B E N G
☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
☐ A ☐ ☐ A	☐ ☐ A ☐ A ☐ A ☐ A
☐ B ☐ B ☐ B	☐ B ☐ B ☐ B ☐ B ☐ B
☐ ☐ C ☐ C	☐ C ☐ C ☐ C ☐ C
☐ D ☐ D	☐ D ☐ D ☐ D

FIRST NAME										LAST NAME			
J	A	M	A	L			B	I	N	A	B	A	S
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐ A	☐	☐ A	☐	☐ A	☐ A	☐ A	☐ A	☐ A	☐ A	☐	☐ A	☐	☐ A
☐ B	☐ B	☐ B	☐ B	☐ B	☐ B	☐	☐ B	☐	☐	☐ B	☐	☐ B	☐ B
☐ C	☐ C	☐ C	☐ C	☐ C	☐ C	☐	☐ C	☐	☐	☐ C	☐	☐ C	☐ C
☐ D	☐ D	☐ D	☐ D	☐ D	☐ D	☐	☐ D	☐	☐	☐ D	☐	☐ D	☐ D

[illegible][illegible]

☐ Male ☐ Female



☐ Yes ☐ No

— — — — —

Day		Month		Year	
(0)	(0)	(0)	(0)	(0)	(0)
(1)	(1)	(1)	(1)	(1)	(1)
(2)	(2)		(2)	(2)	(2)
(3)	(3)		(3)	(3)	(3)
	(4)		(4)	(4)	(4)
	(5)		(5)	(5)	(5)
	(6)		(6)	(6)	(6)

(A)	(K)
(B)	(L)
(C)	(M)
(D)	(N)
(E)	(O)
(F)	(P)
(G)	(Q)

TO ANSWER THE QUESTIONS

MULTIPLE CHOICE

Example: $6 + 4 =$

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

START

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

☐ (A) ☐ (B) ☒ (C) ☐ (D)



FREE RESPONSE

Example: $6 + 6 =$

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

	1	2
☐ 0	☐ 0	☐ 0
☐ 1	☒ 1	☐ 1
☐ 2	☐ 2	☒ 2
☐ 3	☐ 3	☐ 3
☐ 4	☐ 4	☐ 4
☐ 5	☐ 5	☐ 5
☐ 6	☐ 6	☐ 6
☐ 7	☐ 7	☐ 7
☐ 8	☐ 8	☐ 8
☐ 9	☐ 9	☐ 9

--	--	--

1 ☐ (A) ☐ (B) ☐ (C) ☐ (D)

2 ☐ (A) ☐ (B) ☐ (C) ☐ (D)

3 ☐ (A) ☐ (B) ☐ (C) ☐ (D)

4 ☐ (A) ☐ (B) ☐ (C) ☐ (D)

5

☐ 0	☐ 0	☐ 0
☐ 1	☐ 1	☐ 1
☐ 2	☐ 2	☐ 2
☐ 3	☐ 3	☐ 3
☐ 4	☐ 4	☐ 4
☐ 5	☐ 5	☐ 5
☐ 6	☐ 6	☐ 6
☐ 7	☐ 7	☐ 7
☐ 8	☐ 8	☐ 8
☐ 9	☐ 9	☐ 9

QUESTION	KEY	SOLUTION	STRAND	LEVEL OF DIFFICULTY
1	A	The arrow will be most likely to stop on the symbol with the greatest frequency (3 out of 8)	Chance and Data	Easy
2	C	The area of the wall is $3 \times 7 = 21$ square metres. She will be paid $21 \times \$1.50 = \31.50 .	Measurement	Easy
3	A	From the table you can see that the Paris flight departs at 13:50. Fifteen minutes before that is 13:35 and that is the time when flight F023 departs.	Measurement	Easy
4	D	With a careful look at all options, the main difference is the ratio of tomatoes to blackcurrants. Using the given graph, the ratio of tomatoes to blackcurrants is 1:8. Only option D gives this ratio.	Chance and Data	Easy
5	990	990 is the lowest common multiple of 9, 10 and 11.	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

