ISMC International Singapore Maths Competition

INTERNATIONAL SINGAPORE MATHS COMPETITION 2018 (Primary 2)

1 hour 30 minutes

Instructions to participants

1. Do not open the booklet until you are told to do so.

2. Attempt ALL 25 questions.

3. Write your answers neatly in the Answer Sheet provided.

4. Marks are awarded for correct answers only.

5. All figures are not drawn to scale.

6. Neither mathematical tables nor calculators may be used.

Questions in Section A carry 2 marks each, questions in Section B carry 4 marks each and questions in Section C carry between 6 to 10 marks each.

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Section A:
Each of the questions 1 to 10 carries 2 marks.

1. Fill in the blanks in the number patttern below.

   4, ?, 12, 19, 28, 39, 52, ?

2. Ahmad and Ismail have a total of 25 gold chocolate coins. Ahmad has 7 less coins than Ismail. How many coins do Ahmad and Ismail each have now?

3. Julia, Fred, Lucy and Peter are sitting on a row of chairs in the waiting room of a train station. Peter is sitting somewhere between Julia and Lucy. There is a chair between Julia and Fred. Julia is sitting five chairs to the right of Lucy. There are two empty chairs to the right of Fred and an empty chair to his left. If there are no chairs to the left of Lucy, how many chairs are there in the row?

4. How many puppies are there if there are 24 more legs than tails among them?

5. Which two numbers below have a difference of 9?

   1 5 7 8 16 3 11

   The two numbers are _____ and _____.

6. Jan goes to school at 6.30 a.m. every morning. She comes home after the minute hand of the clock has travelled six and a half times around the clock face from the time she left for school. At what time does she come home every day?
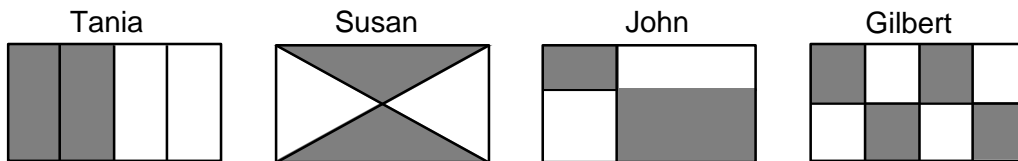
7. Mother baked a loaf of bread. She cut it into 15 equal slices. How many times did she cut the loaf of bread?

8. Draw along the dotted lines to show how you can divide the figure given into 4 equal parts of the same shape.
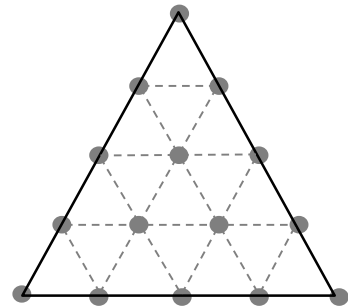
9. Tania, Susan, John and Gilbert were told to shade $\frac{1}{2}$ of a rectangle.

    Which of them did not shade $\frac{1}{2}$ of a rectangle correctly?

Tania	Susan	John	Gilbert

10. How many different 3-digit even numbers can be formed with the digits 5, 0, 3, 4?

Section B
Each of the questions 11 to 20 carries 4 marks.

11. What is the smallest number that can be filled into the blank in the statement below?

$$(\ 21 + \boxed{} \ ) \text{ is more than } (46 - 11).$$

12. Robert is packing some apples into 5 separate boxes. He puts a different number of apples into each of the boxes. The box with the least number of apples has 1 apple in it, while the box with the most number of apples has 10 apples in it. What is the largest possible number of apples that Robert has in total?
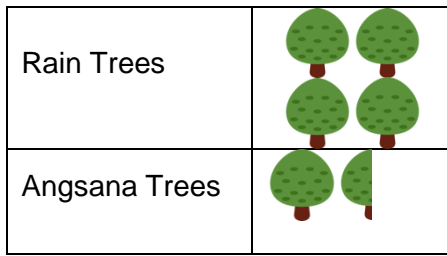
13. Two girls are each less than 9 years old. They are not of the same age. The sum of their ages is 14 years. One girl is older than 6 years. How old are the two girls?

They are _____ years old and _____ years old.

14. How many squares are there altogether in the figure on the right?

15. Study the graph below.
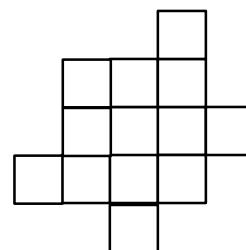
Rain Trees	
Angsana Trees	

If the graph represents 40 Rain Trees and 15 Angsana Trees, how many trees does

each represent?

16. The table below shows a TV programme guide.

| Time	Programme
8:45 am	Cartoons
9:35 am	Sports
10:10 am	News

How much longer was the Cartoons programme than the Sports programme?

17. Dean and Sal are planning to drive from New York to San Francisco. The figure below (not drawn to scale) is taken from a map and shows the way they intend to take. The distance between New York and Denver on the map is 18 cm, while the distance between Chicago and San Francisco on the map is 21 cm. If the distance between Chicago and Denver on the map is 10 cm, what is the distance between New York and San Francisco on the map?
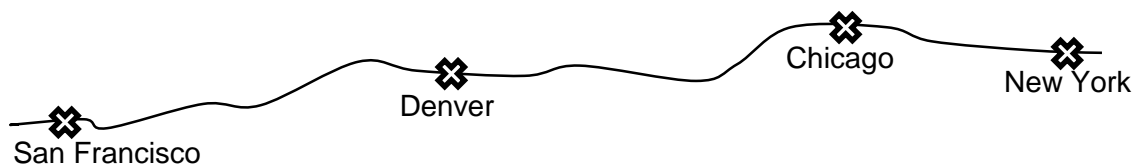
18. $\dfrac{1}{6} + \dfrac{3}{2} = \boxed{} + \dfrac{2}{3}$

19. The 8-sided shape shown below has five diagonal dotted-lines coming out of one corner and touching 5 of the corners of the shape. In this way, the shape is divided into a maximum of 6 triangles. For a shape with 32 sides, how many diagonal lines can be drawn in the same way from one corner to form the maximum number of triangles?
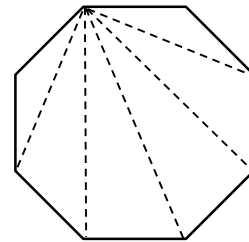
20. A Sports Competition is held every 4 years and an Arts Festival is held every 3 years. If both the Sports Competition and the Arts Festival were held in the year 2009, when will they be held in the same year again?

Section C
Questions 21, 22, 23, 24 and 25 carry 6, 7, 8, 9 and 10 marks respectively.

21. In the table below, five letters have already been filled for you. Fill in the rest of the blanks with the letters A, B, C and D such that there is only one of each letter in each row, each column and each of the longest diagonal.

A			
B			
C			
D		C	

22. Shelley has a rectangle piece of paper 68 cm long and 25 cm wide. She wants to cut the paper into small squares of sides 10 cm. How many squares can she get?
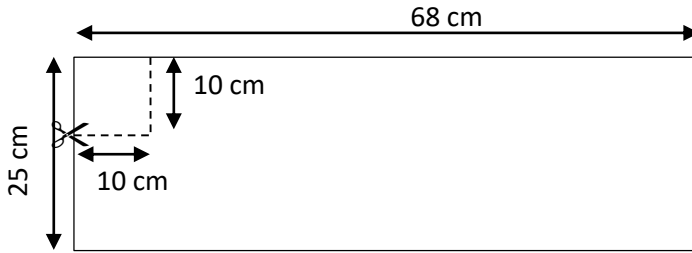
23. A birthday cake is cut into 6 small slices and 6 big slices. Each big slice is 3 times the size of each small slice. William and Samuel each eat 2 big slices. Mary and Percy have 1 small slice and 1 big slice each. What fraction of the whole cake is not eaten?

24. Fill in the missing numbers such that the sum of each set of six numbers horizontally, vertically and in the longest diagonals is 65. What is the value of ○?

17	24	1	8	
23		7		16
	○	13	20	22
10		19	21	
	18		2	9

25. Mike and Nate are playing three different games – Badminton, Tennis and Handball. At the end of each game, they write down their own scores and calculate their combined scores.

Games	Mike's score	Nate's score	Combined scores
Badminton	J	K	35
Tennis	3	L	15
Handball	10	☒	?
Total score	33	M	

In their table of scores, some of the numbers are replaced with the letters – J, K, L and M. The values of some of these letters can be worked out while the values of some cannot be worked out. The value of ☒ is not given.

If you are allowed to ask for the value of only one of the letters, which letter will let you find out the combined score for Handball?

End of Paper