ISMC International Singapore Maths Competition

INTERNATIONAL SINGAPORE MATHS COMPETITION 2019 (Primary 3)

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. No 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.

Jointly organised by

EDUKULTUR ALPHA ACADEMY LEARNERS' CONNECTIONS

Section A:

Each of the questions 1 to 10 carries 2 marks.

1. If 12 ☼ 2 = 25

   13 ☼ 2 = 28

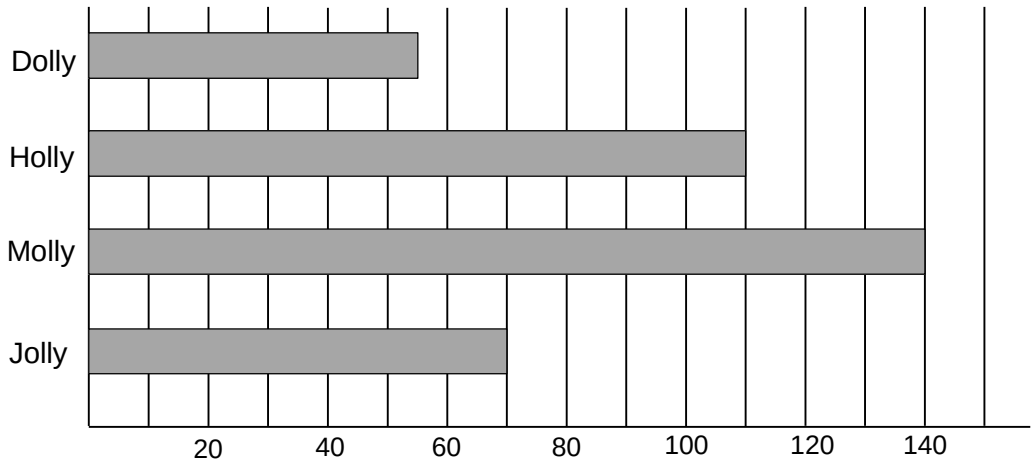
   14 ☼ 2 = 31

   15 ☼ 2 = 34, what is 16 ☼ 2?

2. The digit with the least value in the number 2038 is _____.

3. Three children will celebrate their birthdays on Monday, Tuesday and Wednesday next week. They are 7, 9 and 10 years old. The name of the boy is Russel and the names of the two girls are Natalie and Kelly. The Monday child is 3 years older than her friend, Natalie. The Wednesday child is 9 years old.
   Find out each child's birthday and age.

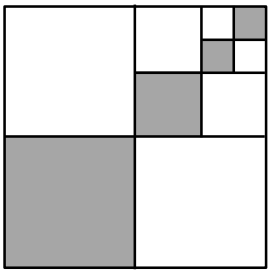
4. The bar graph below shows the number of seashells that four children collected.



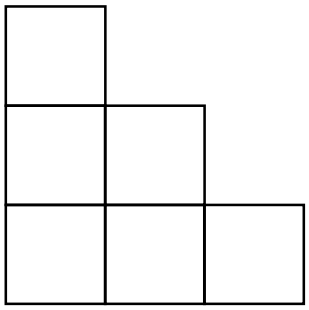
   The total number of seashells Holly and Molly collected is 30 less than 4 times the number of seashells that _____ collected.

5. Trisha cycled from her house to the park. On her way back, she met her sister, who was also cycling towards the park from home. When the sisters met, Trisha had cycled 340 m, and Nicki had cycled 160 m. How far was Trisha's house from the park?

6. What fraction of the figure is shaded?



7. 6 coloured squares – Red, Blue, Green, Yellow, Orange and Black, are in the arrangement as shown.



Green is between Black and Red.
Yellow is directly above Orange.
Orange is between Red and Blue.

What is the colour of the square at the top?

8. 12 less than 7×4 is $\square \times 4$.

9. Ed is $\frac{1}{2}$ as old as Ted, who is $\frac{1}{5}$ as old as Fred. The sum of their ages is 117. How old is Fred?

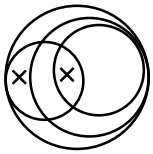
10. A container had 83 ml of water. When 1 l 56 ml of water was poured into the container, 439 ml of water overflowed. What is the capacity of the container?

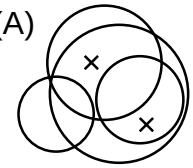
Section B

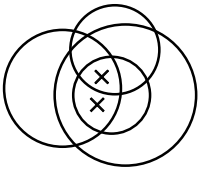
Each of the questions 11 to 20 carries 4 marks.

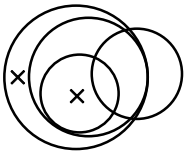
11. Use each of these digits 5, 1, 0, 2 ONCE to form the largest number that can be divided exactly by 4?

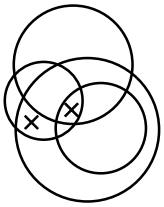
12. Study the diagram and notice the positions of the two crosses, then choose one of the four options that is similar.



(A) 

(B) 

(C) 

(D) 

13. At a family gathering, there were:

1 grandmother
1 grandfather
5 fathers
5 mothers
3 sons
6 daughters
1 father-in-law
1 mother-in-law
4 sons-in-law
3 grandsons
2 granddaughters

How many people were at the family gathering?

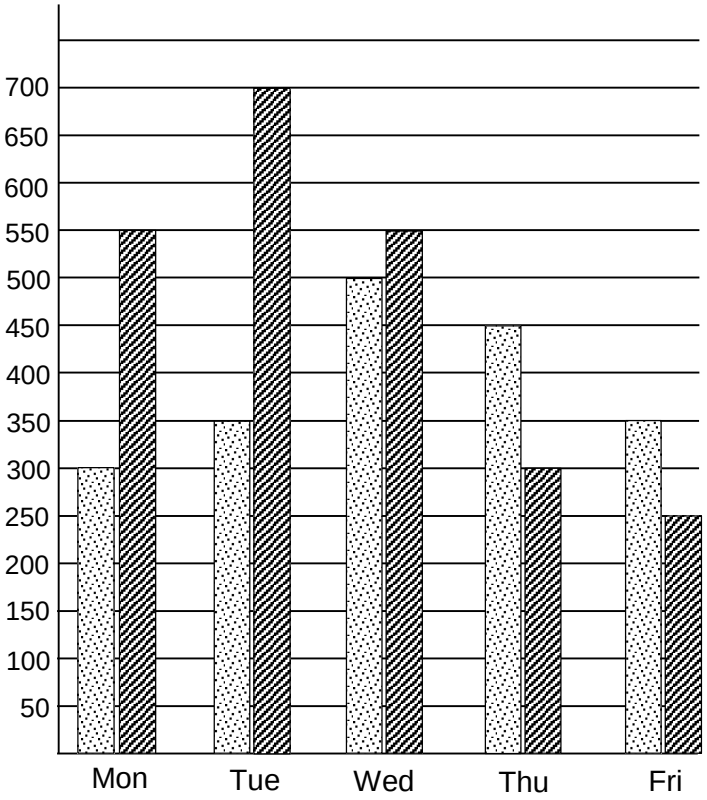
14. Mdm Ting distributed her chocolate evenly among her 20 students. 2 of them were allergic to chocolate and returned their share. She re-distributed the returned share evenly again. At least how many pieces of chocolate did she bring for her students?

15. The graph below shows the number of cars that passed a toll gantry.

These bars show the number of cars that passed in the morning.

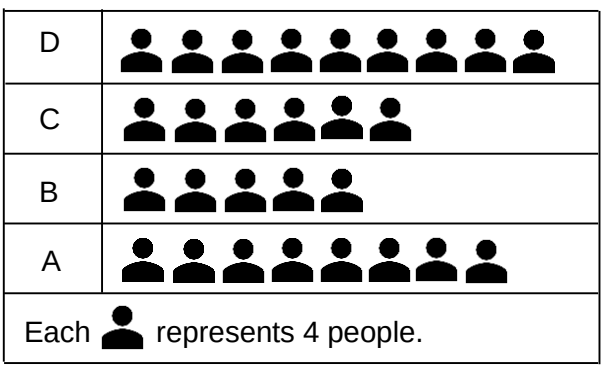
These bars show the number of cars that passed in the afternoon.

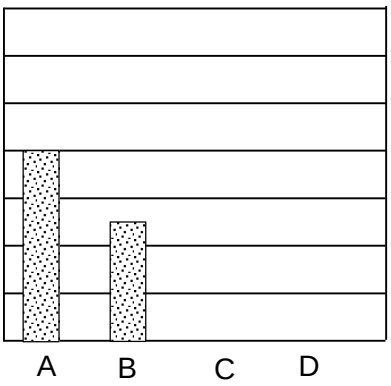
The toll-fee per car was $2.50 in the morning and $1.50 in the afternoon.



Was more money collected for the morning toll or for the afternoon toll for the five days? How much more?

16. Yuli has not finished transferring the information from the picture graph to the bar graph. Complete drawing the bars for C and D in your Answer Sheet.





17. A piece of rope was cut at 2 m from its centre. The shorter part is then cut again at 1 m away from its centre. As a result, the shortest piece was 4 m long. What was the entire length of the rope at first?

18. How many children were at a Children's Party if half of them were below 10 years old; a third were below 9 years old, 5 children were under 8 years old and there were as many between 8 years old and 9 years old as there were between 9 years old and 10 years old?

19. 5 soccer teams are to play against each of the others in a tournament. The numbers of matches the teams have played so far are shown below.

Team	Matches Played
A	3
B	1
C	2
D	2
E	4

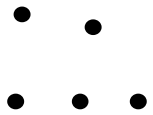
List all the matches that have not been played yet.

20. Charlie made 203 pineapple tarts. John made 45 more pineapple tarts than Charlie. How many pineapple tarts must John give to Charlie so that John has 11 more pineapple tarts than Charlie?

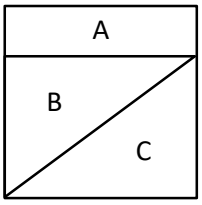
Section C

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

21. How many different triangles can be formed by joining any 3 of the dots below?



22. The square shown is made up of 3 parts – A, B and C.



a) If part A is $\frac{1}{4}$ of the square, what fraction is part B?

b) If part B = 54 cm^2, what is the perimeter of the square?

23. Houses 1 to 5 are in a row.
Their owners are Mr Anand, Mr Bami, Mr Chan, Mr Ding and Mr Elliot.

House 1 and Mr Chan's house own dogs.
House 2 and another house own cats.
Mr Anand's house owns a parrot.
House 1 and Mr Ding's house are blue.
House 3 and Mr Anand's house are yellow.
No two houses side by side are of the same colour or have the same type of pets.

a) Mr Bami's house is green. What is his house number?

b) What is Mr Elliot's house number?

24. a) The total age of Amy and Barry is 42 years 3 months.
Amy is 19 years 9 months older than Barry. How old is Amy?

b) Cary is 10 years old. 4 years ago, her father was 6 times as old as her.
How old is Cary's father in 8 years' time?

c) 10 years from now, Dany will be twice as old as Erny.
Erny is 20 years old now. How old is Dany now?

25. The table below shows the number of different colour beads that Mary has.

Colour	Number
Red	28
Yellow	16
Pink	12
Purple	?
Orange	?
Blue	24

The total number of orange and blue beads is $\frac{5}{8}$ of the total number of red, yellow and pink beads. The total number of purple and orange beads is $\frac{1}{3}$ of all the beads that Mary has.

a) How many orange beads does Mary have?

b) How many purple beads does Mary have?

End of Paper