

*Division*

**P**

Year 4

**MALAYSIA ASEAN  
MATH OLYMPIADS  
2014 CONTEST**



Full Name:

Year:

Date:

Time:

School Name:

School Code:

## Rules and Regulations

(Please read these rules and regulation carefully)

1. Please fill in your **FULL name** correctly, school name, school code and the date and time of contest clearly in the spaces above. Those who do not fill in the required particulars will be disqualified automatically.
2. Do not open the question booklet until you are told to do so. You may only use **2B** pencil when answering the questions.
3. No calculators and any unauthorised electronic devices (including mobile phones) are allowed during the contest.
4. Strict silence must be observed at all times in the examination hall and please be reminded that you **MAY NOT** leave your seat without permission.
5. If you have any request or enquiry, please raise your hand and wait for an invigilator.
6. Only one candidate is allowed to leave the hall at a time. You are required to return to the hall within 10 minutes or else you will automatically be disqualified from the contest.
7. Each question in the contest have been verified by experienced trainers, thus no further explanation will be given.
8. The time allowed for the paper is **90 minutes**. You must stop writing when you are told to do so.
9. You **MUST** fill in your answer in the answer sheet provided in second page of the question booklet. You will not be awarded marks for any answer written in the question booklet.
10. Please be reminded that this is a contest and not an examination, try your level best to answer all questions within the prescribed time.
11. **Please tear off the answer sheet carefully and returned to invigilator along with contest paper. Participant only can bring back the contest papers on next week.**

### Scoring System

1. The correct answer to each problem will be awarded one (1) point. However, you will NOT be penalised for each incorrect answer.
2. The organizer reserves the right to disqualified the event of malpractice to differentiate between those outstanding students.
3. Contestants or a team who are disqualified from the contest will be forfeited any right to re-sit this year.



<i>Division</i> <b>P</b> Year 4	<b>2014</b> <b>ANSWER SHEET</b>	
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1		6		11		16		21	
2		7		12		17		22	
3		8		13		18		23	
4		9		14		19		24	
5		10		15		20		25	

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- 1** A cake is cut into 8 pieces. Dad, Mom, sister, brother and I ate one piece respectively. The rest of the cake was eaten by brother and I in a ratio of 3:1. How many pieces of cake in total that I have eaten?

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- 2** There are 40 questions in an exam paper. A correct answer is given 2 marks, a wrong answer is deducted 1 mark, and no marks for an unanswered question. Alvin and John score the same marks. Alvin answered 30 correct, 6 wrong and 4 unanswered. John answered 31 questions correctly. How many questions did John no answer?

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- 3** The price of gasoline is RM2 per liter. Free gift of three packs of snacks or a cup of noodles is given for every RM10 of gasoline purchased. The cashier gives Alvin 3 packs of snacks and two cups of noodles. How many litres of gasoline have Alvin purchase?

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- 4** In a class, there are 3 students like football. The number of students who like basketball is three times of those who like football. The number of students who like badminton is twice the total of those who like football and basketball. How many students are there in the class?

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- 5** James buys 10 packs of biscuit everyday. He ate 2 packs on the first day and add 1 more pack for every following single day. After how many days, he could eat up all the biscuit that he buys?

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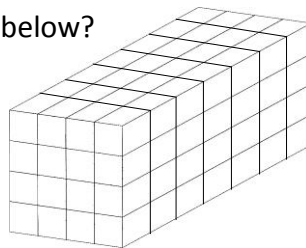


**6** How many 2-digit numbers that the sum of their digits is equals to 8?

**7** Tree A grows 10 cm taller annually, while Tree B grows 15 cm taller annually. After 10 years, the height difference of trees A and B will be 53 cm. What is the height difference of the tree A and B 10 years ago?

**8** The cost of one cup of coffee is RM1, its selling price is RM 1.50. The cost of one cup of tea is RM 0.50, its selling price is RM 1. Benjamin wants to run the coffee and tea business with the capital of RM 10, what is the maximum profit that he can earn?

**9** How many  can be found in the cuboid below?



**10** Put a mathematical symbol to show the relationship of greater than and smaller than between number 4 and 8.



**11** 1, 1, ? , 6, 24, ? , 720

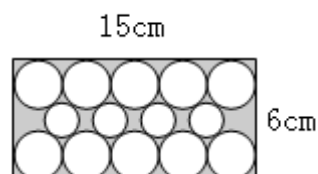
Fill in the missing numbers in order to complete the sequences above.

**12** It took 5 minutes to fill up  $\frac{1}{4}$  of bucket A with water while it took 25 minutes to fill up  $\frac{3}{4}$  of bucket A and  $\frac{2}{5}$  of bucket B. It takes how many minutes to fill up  $\frac{3}{5}$  of bucket B with water?

**13** Minute hand and second hand cross over each other how many times in one day?

**14** When a cuboid iron is cut into three identical cubes of iron, the total surface area will increase  $20 \text{ cm}^2$ . What is the surface area of the cuboid?

**15** There are 10 big circles and 4 small circles in a rectangle as shown in the picture below. The area of a large circle is twice of the area of a small circle. The total area of the shaded region is  $18 \text{ cm}^2$ . Find the area of three large circles.



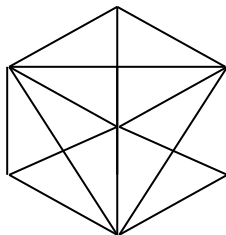
**16**

Two men and three woman are to be seated in a row of chairs labeled A, B, C, D and E. How many different ways of arrangement can be made if men cannot sit next to each other?

**17** An old lady said: "I have seven children, each of their ages differ by three years. I gave birth of my first child when I was 19 year-old, the youngest child is now 21 years old." How old is the old lady now?

**18** How many common multiple of 5 and 6 are there between 100 to 250?

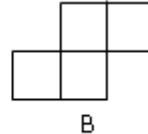
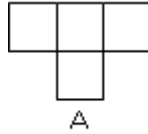
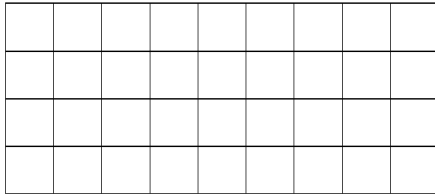
**19** How many triangles can be traced in the figure below?



**20** The price of a can of orange juice is twice of a can of soya. Purchase every three cans of orange juice will get one can of soya for free. Mary spent RM14 to buy 2 cans of orange juice and 3 cans of soya. What is the price for one can of soya?



- 21** The following is the tile placement formed by 2 shapes A and B. If we want to use as much shape A as possible, how many shape A is needed to form this tile placement?



- 22** 2014 is divided by a number  $X$ , the remainder is 5. What is the difference between the smallest possible number  $X$  and greatest possible number  $X$ .

- 23** A teacher has bought some sweets and fruit juice for her students in class. The amount of sweets purchased is 3 times the quantity of fruit juice. When the teacher give each student 4 sweets, she is lack of 10 sweets. If she gives each student 1 fruit juice, there is an extra of 5 fruit juices. Please identify the amount of students in the class.

- 24** Terry buys a toy helicopter set which includes a remote control and charger. He wants to play it for 2 hours continuously. The shop owner said: "One battery is needed for the remote control to operate. The charger can fully charge a battery in one hour and a fully charged battery will depleted within 10 minutes." What is the minimum amount of battery shall Terry buy if there is a fully charged battery in the remote control initially?

- 25** Given that perimeter of the shaded region above is as following:

A: 38m; B: 16m; C: 40m;

D: 16m

It is also known that the perimeter of the whole rectangle PQRS is 70m. What is the area of rectangle PQRS?

