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泰國國際數學競賽 2018（香港賽區）
THAILAND INTERNATIONAL MATHEMATICAL OLYMPIAD 2018 (INDIA REGION)

Primary 2

Time allowed: 90 minutes

Question Paper

Instructions to Contestants:

1. Each contestant should have ONE Question-Answer Book which CANNOT be taken away.
2. There are 5 exam areas and 5 questions in each exam area. There is a total of 25 questions in this Question-Answer Book. Each carry 4 marks. Total score is 100 marks. No points are deducted for incorrect answers.
3. All answers should be written on ANSWER SHEET.
4. Write down the answer in the simplest form. If the calculation result is a fraction, please write down the answer as a proper or mixed fraction, decimal figure is also accepted. Marks will NOT be given for incorrect unit.
5. NO calculators can be used during the contest.
5. All figures in the paper are not necessarily drawn to scale.
6. This Question-Answer Book will be collected at the end of the contest.

THIS Question-Answer Book CANNOT BE TAKEN AWAY.

DO NOT turn over this Question-Answer Book without approval of the examiner.
Otherwise, contestant may be DISQUALIFIED.

All answers should be written on the ANSWER SHEET.

Rough Work

Write down the answer in the simplest form. If the calculation result is a fraction, please write down the answer as a proper or mixed fraction, decimal figure is also accepted. Marks will NOT be given for incorrect unit.

All answers should be written on the ANSWER SHEET.

Open-Ended Questions (1st ~25th) (4 points for correct answer, no penalty point for wrong answer)

Logical Thinking

1. Given Amy's father has 5 children, how many brother(s) and sister(s) does Amy have?

2. According to the pattern shown below, how many triangle(s) is / are there within the 26th symbol counting from the left?

3. When Amy was born, mum was 34 years old. When Amy will be 15 years old, how old will mum be?

4. In year 2018, how many month(s) is / are there with 31 days?

5. According to the pattern shown below, what is the English alphabet in the space provided?

A 、 E 、 I 、 M 、 __ 、 ….

Arithmetic

6. Find the value of $2+4+6+8+10+12+14+16$.

7. Find the value of $17\times11+17\times3-17\times4$.

8. Find the value of $2-5+8-11+14-17+20-23+26$.

9. Find the value of $1+2+3+4+5+6+5+4+3+2+1$.

10. If A and B are both 1-digit numbers, what is the value of $A+B$ if the equation with carry forward is correct?

$$\begin{array}{cccc} & & & B \\ + & & A & B \\ \hline & & 6 & 6 \end{array}$$

Question 10

All answers should be written on the ANSWER SHEET.

Rough Work

Write down the answer in the simplest form. If the calculation result is a fraction, please write down the answer as a proper or mixed fraction, decimal figure is also accepted. Marks will NOT be given for incorrect unit.

All answers should be written on the ANSWER SHEET.

Number Theory

11. Determine the result of $3+7+11+15+19+23+27+31$ is odd or even number.

12. Fill the lines with ' × ' and ' – ' to make the equation below correct. (Write down the complete equation on the answer sheet)

$$7 \_\_\_\_ 4 \_\_\_\_ 5 \_\_\_\_ 3 = 13$$

13. The numbers below follow the arithmetic sequence, what is the 9^{th} number?

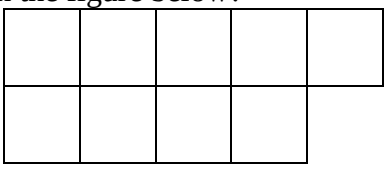
12、21、30、39、48、…

14. How many 2-digit even number(s) that is / are multiples of 3 is / are there?

15. What is the largest 2-digit number that can be divisible by 4 and 6?

Geometry

16. How many square(s) is / are there in the figure below?

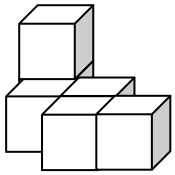


Question 16

17. A prism has 8 vertices, how many face(s) does this prism have?

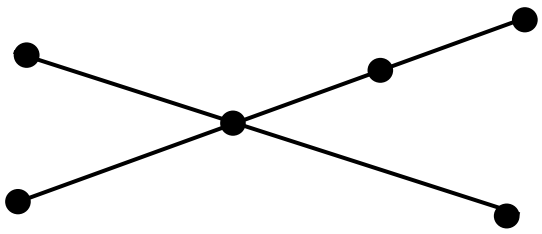
18. It is known as the lengths of shorter sides for a right-angled triangle are 6cm and 8cm respectively. Find the length of the longest length.

19. At least how many squares can be seen if viewing the figure below from side?



Question 19

20. How many line segment(s) is / are there in the figure below?



Question 20

Write down the answer in the simplest form. If the calculation result is a fraction, please write down the answer as a proper or mixed fraction, decimal figure is also accepted. Marks will NOT be given for incorrect unit.

All answers should be written on the ANSWER SHEET.

Rough Work

Write down the answer in the simplest form. If the calculation result is a fraction, please write down the answer as a proper or mixed fraction, decimal figure is also accepted. Marks will NOT be given for incorrect unit.

All answers should be written on the ANSWER SHEET.

Combinatorics

21. According to the following answers, how many 2-digit number(s) is / are there?

$$15+13,\ 19-8,\ 14-9,\ 2+9,\ 19-10,\ 11-8,\ 17-9,\ 3+7,\ 18-7$$

22. Choose 2 digits, without repetition, from 0, 3, 4, 5, 7 to form 2-digit numbers. Of these 2-digit numbers, how many of them are odd numbers?

23. There are 2 ways from the market to the train station. There are 4 ways from the train station to the cinema. There are 3 ways from the cinema to the library. How many different way(s) is / are from the market to the library through the train station and cinema respectively?

24. What is the smallest 4-digit number by using 0, 2, 4, 6 and 8? (Each number can only be used once)

25. Peter has 6 $1 coins, 2 $2 coins and 4 $5 coins, how many souvenir(s) can at most he can buy for a souvenir costed $6?

~ End of Paper ~