



奧冠教育中心

OLYMPIAD CHAMPION EDUCATION CENTRE

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香港國際數學競賽初賽 2019 (香港賽區)

HONG KONG INTERNATIONAL
MATHEMATICAL OLYMPIAD
HEAT ROUND 2019 (HONG KONG REGION)

小學二年級 Primary 2

時限：90 分鐘

Time allowed: 90 minutes

模擬試題

Mock Paper

考生須知：

Instructions to Contestants:

1. 本卷包括 試題 乙份，試題紙不可取走。

Each contestant should have ONE Question-Answer Book which CANNOT be taken away.

2. 本卷共 5 個範疇，每範疇有 5 題，共 25 題，每題 4 分，總分 100 分，答錯不扣分。

There are 5 exam areas and 5 questions in each exam area. There are a total of 25 questions in this Question-Answer Book. Each carries 4 marks. Total score is 100 marks. No points are deducted for incorrect answers.

3. 請將答案寫在 答題紙 上。

All answers should be written on ANSWER SHEET.

4. 比賽期間，不得使用計算工具。

NO calculators can be used during the contest.

5. 本卷中所有圖形不一定依比例繪成。

All figures in the paper are not necessarily drawn to scale.

6. 比賽完畢時，本試題會被收回。

This Question-Answer Book will be collected at the end of the contest.

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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.

請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

本試題不可取走。

THIS Question-Answer Book CANNOT BE TAKEN AWAY.

未得監考官同意，切勿翻閱試題，否則參賽者將有可能被取消資格。

DO NOT turn over this Question-Answer Book without approval of the examiner.

Otherwise, contestant may be DISQUALIFIED.

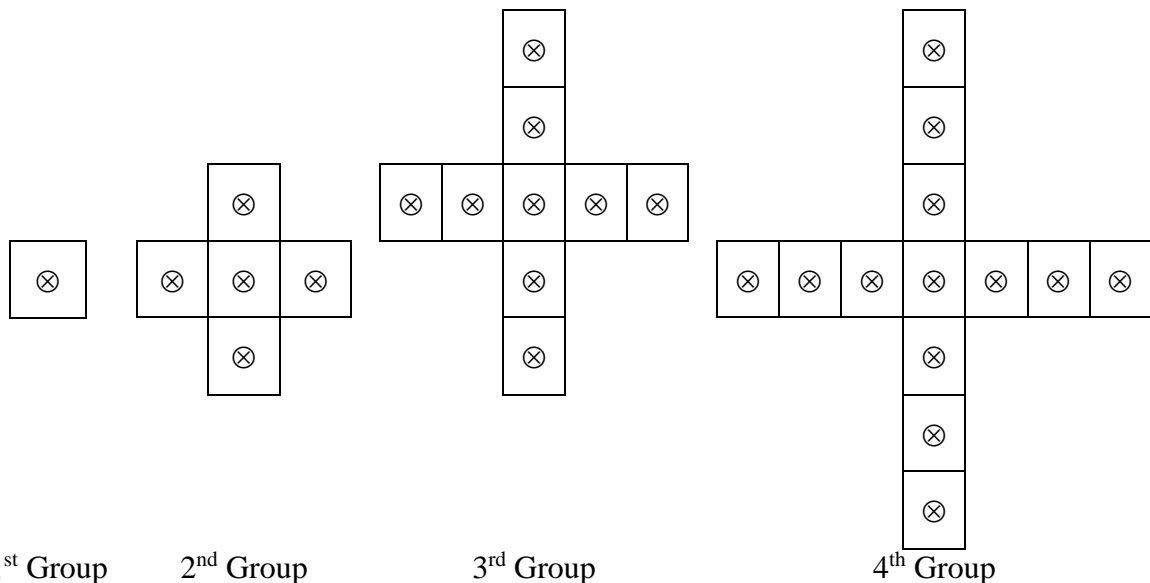
填空題 (第 1 至 25 題) (每題 4 分，答錯及空題不扣分)

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

Logical Thinking

邏輯思維

1. If the day after tomorrow is Wednesday, which day of the week the day before yesterday is?
後天是星期三，問前天是星期幾？
2. 16 children form a column. Amy is the 7th position counting from the front. What is her position counting from behind?
16 個小孩排成一列，艾美站在前面數第 7 個，那麼她是後面數的第幾個？
3. According to the pattern shown below, what is the number in the blank?
按以下規律，求在橫線上的數字。
3、6、10、15、21、28、 、....
4. John goes home by taxi and he needs to pay \$90. How much does he has to pay if he goes home by taxi with his father, mother and sister?
約翰乘坐的士回家需要付 90 元。若約翰和爸爸媽媽及妹妹一起乘的士回家，他需要付多少元？
5. According to the pattern shown below, how many ⊗ is / are there in the 12th group?
按以下規律，問第 12 組有多少個 ⊗？



請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。
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.

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第 1 組

第 2 組

第 3 組

第 4 組

Question 5

第 5 題

Arithmetic

算術

6. Find the value of $2+8+12+18+22+25+28+35$.

求 $2+8+12+18+22+25+28+35$ 的值。

7. Find the value of $105 \div 3 - 105 \div 5 + 105 \div 7$.

求 $105 \div 3 - 105 \div 5 + 105 \div 7$ 的值。

8. Find the value of $22-19+16-13+10-7+4-1$.

求 $22-19+16-13+10-7+4-1$ 的值。

9. What is the number that should be filled in the blank if the equation below is correct?

在以下算式填上甚麼數字會使算式正確？

$$\underline{\hspace{2cm}} \times 45 = 405$$

10. If A and B are different 1-digit numbers, what is the value of A if the equation is correct?

若 A 和 B 為不同的 1 位數字，且以下算式正確，求 A 的值。

$$\begin{array}{|c|c|} \hline A & B \\ \hline \end{array} + \begin{array}{|c|} \hline B \\ \hline \end{array} = \begin{array}{|c|c|} \hline B & 4 \\ \hline \end{array}$$

Number Theory

數論

11. Amy has 73 apples and John has 39 apples. How many apple(s) does Amy have to give John to make them have the same number of apples?

艾美 有 73 個蘋果，約翰 有 39 個蘋果。要使兩人有相同數量的蘋果，艾美 要給 約翰 多少個蘋果？

12. 4 students have 38 balloons in total. Two children have even number of balloons and one child has odd number of balloons. Determine the number of balloons of the remaining child.

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請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

4 個小孩一共有 38 個氣球。已知其中 2 個小孩有偶數個氣球，有 1 個小孩有奇數個氣球。判斷剩下的那個小孩有奇數還是偶數個氣球。

13. The numbers below follow the arithmetic sequence, what is the 11th number?

根據以下的等差數列，問第 11 個數是甚麼？

143、139、135、131、127、...

14. How many 3-digit number(s) having the units digit 1 is / are there?

有多少個三位數的個位數是 1？

15. Fill the lines with ‘+’ and ‘×’ to make the equation below correct. (Write down the complete equation in the answer sheet)

在橫線上填上加號或乘號，使下列算式正確。(在答題紙上寫上完整算式)

$$1 \quad \underline{\quad} \quad 2 \quad \underline{\quad} \quad 3 \quad \underline{\quad} \quad 4 \quad \underline{\quad} \quad 5 = 20$$

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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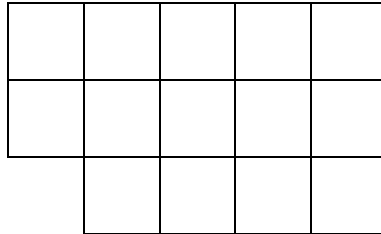
All answers should be written on the ANSWER SHEET.

Geometry

幾何

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

請問下圖有多少個正方形？



Question 16

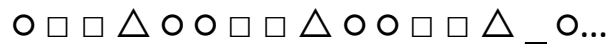
第 16 題

17. A prism has 9 faces, how many vertice(s) does this prism have?

有一個柱體有 9 個面，問這個柱體有多少個頂點？

18. According to the pattern shown below, what is the figure in the space provided?

按以下規律，橫線上的圖案應該是甚麼？

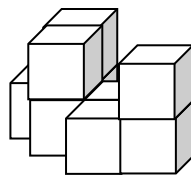


Question 18

第 18 題

19. At least how many square(s) can be seen if viewing the figure below from top?

如果從上邊俯視下圖的立體，最少可以看見多少個正方形？



Question 19

第 19 題

20. At most how many rectangle(s) can be formed by drawing 5 straight lines on a plane?

在平面上畫 5 條直線，最多可組成多少個長方形？

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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.

請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

Combinatorics

組合數學

21. After Amy gives 3 apples to Andy and 7 apples to Johnny, they will have equal number of apples. How many apple(s) did Amy have more than Johnny originally?
當艾美把 3 個蘋果送給安迪及把 7 個蘋果送給強尼後，他們擁有的蘋果數目便一樣。問原本艾美比強尼多多少個蘋果？
22. What is the smallest 4-digit number by using 3, 5, 6 and 8 that is divisible by 5? (Each number can only be used once)
利用 3、5、6、8 組成的四位數，當中能被 5 整除的最小是多少？（每個數字只能用一次）
23. Every 2 of the 6 children shake hand. How many times do they shake hands?
6 個小孩每 2 個人握 1 次手，他們共握了多少次手？
24. How many odd number(s) is/are there in the following numbers from the 1st to the 30th?
下面的數由第 1 個到第 30 個數之間，有多少個奇數？〔奇數即是單數〕
1, 2, 3, 5, 8, 13,...
25. Jack has 6\$1 coins, 4 \$2 coins and 2 \$5 coin, how many way(s) can he buy for a souvenir cost \$8 without any changes?
積克有 6 枚 1 元、4 枚 2 元和 2 枚 5 元硬幣，如果一件紀念品的售價為 8 元，他有多少種方法付款購買而不須找贖？

~ 全卷完 ~

~ End of Paper ~

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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