

**第二屆全港小學數學挑戰賽(2015-2016)**  
**The Second Annual Hong Kong Primary Mathematics Challenge (2015-2016)**

**決賽 (二零一六年四月二日)**  
**Final (2<sup>nd</sup> April, 2016)**

**小四組                      個人項目                      試卷**  
**Primary 4                      Individual Event                      Question Paper**

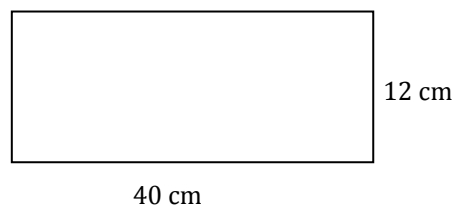
**參賽者須知 Instructions to Contestants**

1. 在比賽過程中，參賽者必須將准考證放在桌上。  
You should place your Admission Form on your desk for the whole session.
2. 於比賽期間必須關掉所有手提電話、通訊工具及其他響鬧裝置。  
During the competition, you should switch off your mobile phone and any other electronic or communication devices that can emit sound.
3. 本項目以筆試形式舉行，須於限時 45 分鐘內完成所有題目。  
Contestants should finish all questions in this 45-minutes written test.
4. 在答題紙上填寫學校名稱、參賽者姓名及班級、參賽者編號、座位編號。  
Write your name, class, admission number, seat number and school name on the front cover of your answer sheet.
5. 參賽者於比賽時只准使用大會提供之草稿紙。  
You can only use the rough work sheet provided by the organizer.
6. 參賽者不可於比賽中使用計算機。  
The use of calculators is NOT allowed.
7. 每題只需把答案填寫在大會提供之答題紙上，否則不予評分。參賽者不需填寫計算步驟。  
Put your answers on the answer sheet provided, otherwise, the answers will not be marked. You are not required to show the steps in your calculations.
8. 除非問題特別聲明，分數的答案須化至最簡。  
Unless otherwise stated by the question, answers of fraction should be expressed in their simplest form.
9. 除特殊情況外，參賽者於本項目完結前不能提早交卷或離場。  
Under normal circumstances, contestants are not allowed to leave the contest venue before the end of this session.
10. 違反比賽規則者有可能被取消參賽資格。  
Any contestant who violates the rules and regulations of the competition might risk disqualification.
11. 參賽者如對比賽過程或試題內容有任何疑問或爭議，參賽者須於當天比賽結束後立即向大會提出，否則不予受理。大會保留是次比賽的所有最終決定權。  
If you have any queries, you should contact the officer-in-charge immediately after the competition. Late queries will not be entertained. The decision of the organizing committee will be final.

時限：四十五分鐘  
Time Allowed: 45 minutes

總分：100  
Total marks: 100

1. 計算  $0.2468 + 2.468 + 24.68 + 246.8 =$  (2 分)  
Evaluate  $0.2468 + 2.468 + 24.68 + 246.8 =$  (2 marks)
2. 將 1357531 除以 3 時，餘數是多少？ (3 分)  
What is the remainder when 1357531 is divided by 3? (3 marks)
3.  $12a45$  為一被 13 整除的五位數，求  $a$  的值。 (2 分)  
 $12a45$  is a 5-digit number and it is divisible by 13. Find  $a$ . (2 marks)
4. 求  $111111 \times 123$  的最後兩個位數字。 (3 分)  
Find the last two digits of  $111111 \times 123$ . (3 marks)
5. 將 0.28125 日轉換小時及分鐘。 (3 分)  
Express 0.28125 day into hour and minute. (3 marks)
6. 計算  $11 \times 20 + 12 \times 19 + 13 \times 18 + 14 \times 17 + 15 \times 16 =$  (4 分)  
Evaluate  $11 \times 20 + 12 \times 19 + 13 \times 18 + 14 \times 17 + 15 \times 16 =$  (4 marks)
7. 圖中的長方形最少能分割成多少個(可以不同大小)正方形？ (4 分)  
Find the least number of squares(not necessary are equal in sides) can be cut from the following rectangle. (4 marks)



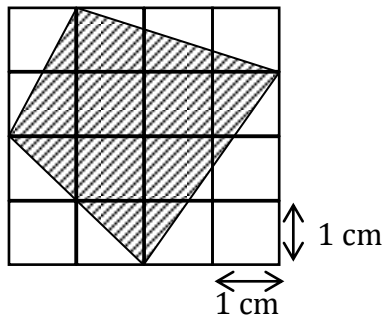
8. 用 2、3、4、5 組成不同的四位數(數字不可重覆)，求當中有多少個數能被 8 整除。 (4 分)  
Use 2, 3, 4, 5 to form 4-digit numbers (without being repeated).  
How many numbers of them are divisible by 8. (4 marks)

9. 求以下數列中方格內的數字。 (5 分)  
Find the numbers in the squares of the following sequence. (5 marks)

1, 2, 3, 6, 11, 20, ,

10. 如果  $a * b = (a - b) \div (a + b) \times (a \times b)$ ，求  $(3 * 2) * 1$  的值。 (5 分)  
If  $a * b = (a - b) \div (a + b) \times (a \times b)$ . Find the value of  $(3 * 2) * 1$ . (5 marks)

11. 求下圖陰影部份面積。 (5 分)  
Find the area of the shaded region of the following figure. (5 marks)



12. 已知 2016 年 12 月 30 日是星期五，那麼 2020 年 12 月 30 日是星期幾？ (5 分)  
Given that 30<sup>th</sup> December 2016 is Friday, then what is the weekday of 30<sup>th</sup> December 2020? (5 marks)

13. 如果  $\frac{A \ B \ C}{1 \ 2 \ 3 \ 4}$ ，求  $A + B + C + D + E + F$  的最少值。 (5 分)

- If  $\frac{A \ B \ C}{1 \ 2 \ 3 \ 4}$ , find the least value of  $A + B + C + D + E + F$ . (5 marks)

14. 根據下列規律，求方格內的字母。 (5 分)  
According to the following pattern, find the letter in the square. (5 marks)

B, E, H, K, , S, V, Y

15. 於下列方格內填上 '+', '-', '×' 或 '÷', 使算式成立。 (6 分)  
 Fill in the boxes with '+', '-', '×' or '÷', so that the statement is true. (6 marks)

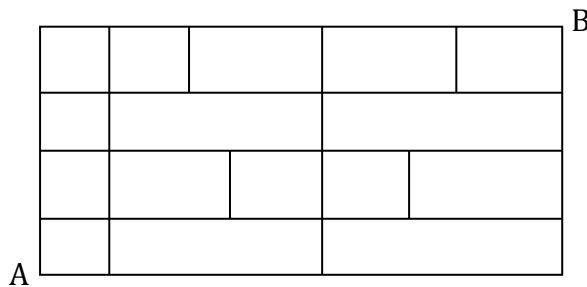
$$8 \square 7 \square 6 \square 5 \square 4 \square 3 \square 2 \square 1 = 17$$

16. 2 杯可樂和 4 個漢堡包價值 \$105；4 杯可樂和 2 個漢堡包價值 \$81。現購買 5 杯可樂和 7 個漢堡包要付多少錢？ (7 分)  
 2 cups of coke and 4 hamburgers cost \$105 ; 4 cups of coke and 2 hamburgers cost \$81. How much do 5 cups of coke and 7 hamburgers cost? (7 marks)

17. 學校師生坐小型巴士旅行。如果每車坐 15 人，則有 6 人不能乘車；如果每車多坐 3 人，恰好多出一輛車。若學生數目是老師的 13 倍，那麼一共有多少名學生？多少名老師？ (8 分)

Teachers and students are going on a trip by minibus. If there are 15 people in each minibus, then 6 people cannot get into the minibus. If 3 extra people are put into each minibus, then they need one minibus less. If the number of students is 13 times of the number of teachers. How many students and teachers are there in the trip respectively? (8 marks)

18. 若只可向右或向上走，下圖中由 A 點至 B 點共有多少種不同的路綫？ (7 分)  
 The diagram below shows a map. If you are only allowed to move rightwards or upwards from point A to point B. How many ways are there? (7 marks)



19. 三個質數的積是 65131，求該三個質數的和。 (8 分)  
 The product of three prime numbers is 65131. Find the sum of these three numbers. (8 marks)

20. 彼得習慣星期一吃 1 個橙，星期二吃 2 個橙，星期三吃 3 個橙，如此類推，而星期日則不吃橙。問彼得一年最多吃多少個橙？ (9 分)  
 Peter eats 1 orange every Monday, 2 every Tuesday, 3 every Wednesday, and so on. However, he does not eat any oranges on Sundays. How many oranges does Peter eat in a year at most? (9 marks)