

第一屆全港小學數學挑戰賽(2014-2015)
The 1st Hong Kong Primary Mathematics Challenge (2014-2015)

初賽 (二零一四年十二月六日)
Semi-Final (6th December, 2014)

小五組 個人項目 試卷
Primary 5 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

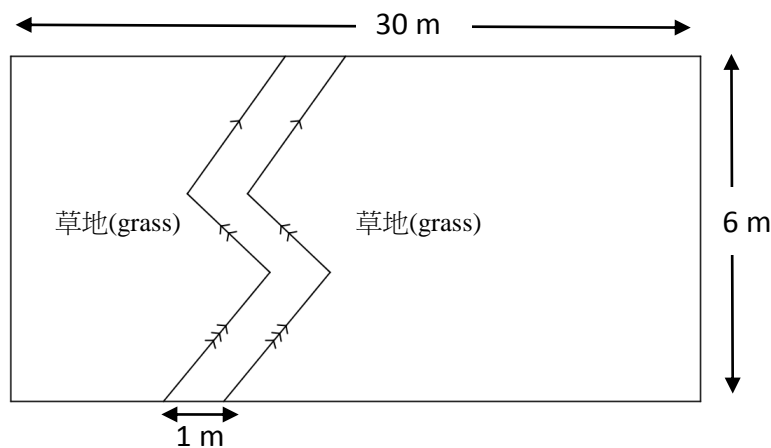
總分：100
Total marks: 100

- 計算 $2.8 + (7.3 - 1.6 \times 3.5) \div 0.4$ 。 (3 分)
Find the value of $2.8 + (7.3 - 1.6 \times 3.5) \div 0.4$. (3 marks)
- 在分母是 20 的分數中，哪兩個分數比 $\frac{3}{4}$ 小，但比 $\frac{3}{5}$ 大？(答案不用化簡。) (3 分)
Find two fractions of denominator 20 with a value greater than $\frac{3}{5}$ and less than $\frac{3}{4}$.
(No need to simplify the answer) (3 marks)
- 將下列 3 個數由大至小排列。 (5 分)
Arrange the following 3 numbers in descending order. (5 marks)

$\frac{7}{13}$, $\frac{9}{19}$, $\frac{15}{29}$
- 兩個質數的和為 66，求該兩數的積的最大值。 (4 分)
The sum of two prime numbers is 66, find the largest value of the product of these two numbers. (4 marks)
- 在下式空格中填上適當的 +、-、× 或 ÷。 (3 分)
Fill in the spaces below with the symbols +, -, × or ÷. (3 marks)

$a \div (b \div c) = a$ _____ b _____ c
- 計算 $(8888 + 8886 + 8884 + \dots + 8002) - (2 + 4 + 6 + \dots + 888)$ 。 (3 分)
Find the value of $(8888 + 8886 + 8884 + \dots + 8002) - (2 + 4 + 6 + \dots + 888)$. (3 marks)
- 計算 $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \frac{1}{64}$ 。 (4 分)
Find the value of $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \frac{1}{64}$. (4 marks)
- 計算 $\frac{191919}{939393} + \frac{19019}{93093} + \frac{190019}{930093}$ 。 (4 分)
Find the value of $\frac{191919}{939393} + \frac{19019}{93093} + \frac{190019}{930093}$. (4 marks)

9. 一班同學在聚會中互相握手，若每人均與其他同學握手一次，所有同學共握手 36 次，問這次聚會中的同學共有多少人？ (6 分)
 A group of students are in a gathering. They shake hands with each other once. There are total 36 handshakes. How many students are there? (6 marks)
10. 商店有三款糖果出售：A 款一包有 18 粒，B 款一包有 24 粒，C 款一包有 16 粒。陳老師打算買這三款糖果，並且要各款糖果的數目相同，問每款糖果最少要有多少粒？ (5 分)
 There are 3 kinds of candies in a shop: A, B and C. There are 18 pieces in a pack of kind A, 24 pieces in a pack of kind B and 16 pieces in a pack of kind C. Ms. Chan wants to buy the same number of candies of each kind, how many of each kind of candy does she have to buy? (5 marks)
11. 若 $3(21-x)-5=7$ ，求 x 的值。 (4 分)
 If $3(21-x)-5=7$, find the value of x . (4 marks)
12. 圖中所示為一個長方形的草地，中間有一條均勻寬度的小徑，求草地部分的面積。 (4 分)
 The figure shows a rectangular field of grass with a walking path of uniform width. Find the area covered by grass. (4 marks)



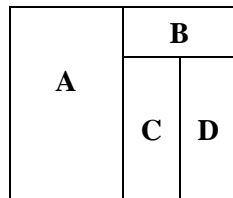
13. 定義 $X \triangleright Y = Y - X$ 和 $X \oplus Y = Y + 3X$ 。若 $(a \triangleright 3a) \oplus a = 56$ ，求 a 之值。 (6 分)
 Define $X \triangleright Y = Y - X$ and $X \oplus Y = Y + 3X$. If $(a \triangleright 3a) \oplus a = 56$, find the value of a . (6 marks)
14. 在數學比賽中，有 20 題問題，答對 1 題可得 10 分，答錯 1 題扣 5 分。小明得 95 分，他答對了多少題？ (6 分)
 In a mathematics competition, there are 20 questions. 10 marks are awarded for each correct answer and 5 marks are deducted for each wrong answer. David gets 95 marks, how many questions did he answer correctly? (6 marks)
15. 某五位數 $4X928$ 可以被 13 整除，這個五位數是甚麼？ (6 分)
 A 5-digit number $4X928$ is divisible by 13, what is this 5-digit number? (6 marks)

16. $1 \times 2 \times 3 \times \dots \times 30$ 的末位有多少個連續的零？ (6 分)
 How many trailing zeros are there in the product of $1 \times 2 \times 3 \times \dots \times 30$? (6 marks)

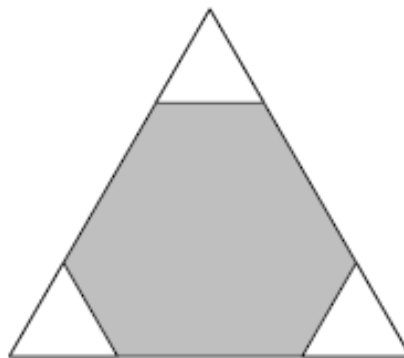
17. 計算 $2016 \times 2015 - 2015 \times 2014 + 2014 \times 2013 - 2013 \times 2012$ 。 (8 分)
 Find the value of $2016 \times 2015 - 2015 \times 2014 + 2014 \times 2013 - 2013 \times 2012$. (8 marks)

18. 計算 $\left(2\frac{7}{500} \times 1000\right) \div \left(\frac{1}{1006} + \frac{2}{1006} + \frac{3}{1006} + \dots + \frac{1005}{1006} + \frac{1006}{1006}\right)$ 。 (8 分)
 Find the value of $\left(2\frac{7}{500} \times 1000\right) \div \left(\frac{1}{1006} + \frac{2}{1006} + \frac{3}{1006} + \dots + \frac{1005}{1006} + \frac{1006}{1006}\right)$ (8 marks)

19. 地圖上有 A, B, C, D 四個國家，現用紅、藍、黃、綠四種顏料給地圖塗色，每個國家的顏色都不同。問有多少種不同的塗色方法？ (6 分)
 There are four countries on a map A, B, C, D. If we use red, blue, yellow and green (four colors) to paint the map so that all the countries are in different colors. How many different ways of painting are there? (6 marks)



20. 從一個邊長 6 cm 的正三角形的三隻角切去三個大小一樣的正三角形。若切去的三個小三角形的周界總和等於餘下部份的周界。求每隻小三角形的邊長。 (6 分)
 Three small equilateral triangles of the same size are cut off from 3 corners of an equilateral triangle of sides 6 cm. If the total perimeter of the 3 small equilateral triangles is equal to the perimeter of remaining part, find the length of the sides of the small equilateral triangles. (6 marks)



試卷完 END OF PAPER