亞 洲 國 際 數 學 奧 林 匹 克 聯 合 會
ASIA INTERNATIONAL MATHEMATICAL OLYMPIAD UNION

亞洲國際數學奧林匹克公開賽初賽
Asia International Mathematical Olympiad Open Trials

小四組 Grade 4

時限：70 分鐘

Time allowed: 70 minutes
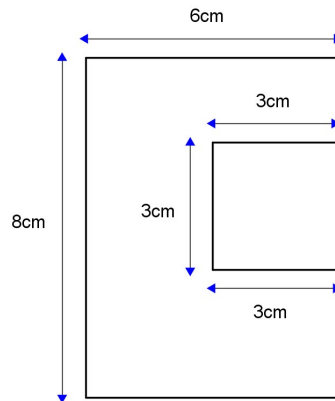
樣本試題
Sample Questions

請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

甲部：每題 4 分

Section A – each question carries 4 marks

1) 求以下圖形的周界(厘米)。
   Find the perimeter of the figure below (in cm).

第 1 題
Question 1

2) 學校共有 313 個童軍，最多每 7 個童軍 1 組，問最少共有多少組？
   313 boy scouts are divided into groups and each group has at most 7 scouts. At least how many groups can be divided this way?

3) 求 $480 \div 4 + 480 \div 6 + 480 \div 10$ 的值。
   Find the value of $480 \div 4 + 480 \div 6 + 480 \div 10$.

4) 有一個等差數列：「27、35、43、51、…」，求該數列的第 21 項。
   Find the 21st term of the arithmetic sequence 27、35、43、51、…

5)

6)

7)

8)

~ 甲部完 ~
~ End of section A ~

請以最簡形式填寫答案。若計算結果是分數，請化至最簡，並確保為真分數或帶分數，或將計算結果寫成小數。
答案可以根式表示，唯該根式必須是最簡形式。除特別註明外，毋需填寫單位。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. You may use square root to represent the answer which is in the simplest form.
Unless otherwise stated, no need to write down any unit. Marks will NOT be given for incorrect unit.

乙部：每題 5 分

Section B – each question carries 5 marks

9) 若 $\overline{279A5}$ 除以 9 餘 4，求 A 的值。

When a five-digit number $\overline{279A5}$ is divided by 9, the remainder is 4. Find the value of A.
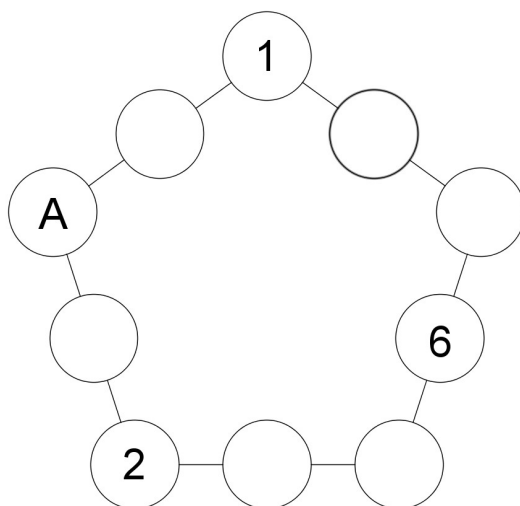
10) 求 $12 \times 22 + 13 \times 24 + 17 \times 36$ 的值。

Find the value of $12 \times 22 + 13 \times 24 + 17 \times 36$.

11) 小美每天有的零用錢是小花每天的 3 倍，而小珠每天有的零用錢比小美每天多 7 元。她們每星期有 980 元，求小珠每天有零用錢多少元？

The amount of Amy's pocket money each day is 3 times as much as the pocket money of Flora's. And the amount of Pearl's pocket money is \$7 more than Amy's. If they have \$980 of pocket money each week, how much pocket money does Pearl have each day?

12) 將 1-10 這 10 個數填入圖中各圓內，使得正五邊形每條邊的 3 個圓圈之和都等於 14。求 A 的值？

Each of the numbers from 1 to 10 are filled in the circles in the figure so that the sum of each side of the pentagon is 14. What number should be filled in the circle with an A?

第 12 題

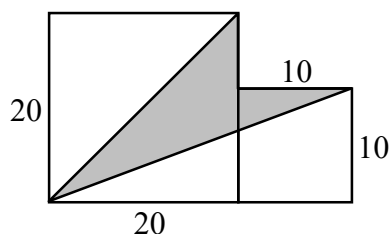Question 12

13)

14)

15)

16)

~ 乙部完 ~

~ End of section B ~

請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

丙部：每題 7 分

Section C – each question carries 7 marks

17) 下圖是由 2 個正方形拼成的，求右圖陰形部份面積。(提示：三角形面積與矩形面積的關係)
The figure is formed by 2 squares. Find the area of the shaded region
(Hint: Consider the relationship between the area of triangle and the area of rectangle)

第 17 題
Question 17

18) 若 $\overline{ABCD}$ 是 1 個 4 位數及可被 8 整除，而 $\overline{ABC}$ 及 $\overline{DCB}$ 也可被 8 整除。求 $\overline{ABCD}$ 的最小值。
If $\overline{ABCD}$ is a 4-digit number divisible by 8 and both $\overline{ABC}$ and $\overline{DCB}$ are divisible by 8. Find the smallest possible value of $\overline{ABCD}$.

19)

20)

~ 全卷完 ~
~ End of Paper ~

請以最簡形式填寫答案。若計算結果是分數，請化至最簡，並確保為真分數或帶分數，或將計算結果寫成小數。
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