

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

小三組 Grade 3

時限：70 分鐘

Time allowed: 70 minutes

樣本試題
Sample Questions

本試題不可取走。

THIS QUESTION PAPER 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 Paper without approval of the examiner.

Otherwise, contestant may be DISQUALIFIED.

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 $123 + 456 + 789 - 159 - 426 - 783$ 的值。

Find the value of $123 + 456 + 789 - 159 - 426 - 783$.

- 2) 若某年的 2 月 1 日是星期一，該年的 1 月 1 日是星期幾？

If the 1st of February of a year is a Monday. Which day of the week is the 1st of January of the same year?

- 3) 已知 $11 \times 11 = 121$ 、 $111 \times 111 = 12321$ ，求 11111×11111 的值。

It is known that $11 \times 11 = 121$ and $111 \times 111 = 12321$. Find the value of 11111×11111 .

- 4) 若某數乘 9，再將得出的積加上 1009 後，得 11008，求某數的值。

If a number is multiplied by 9 and add the product by 1009, the result is 11008. Find the number.

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.

請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

乙部：每題 5 分

Section B – each question carries 5 marks

- 9) 求 $2016 \times 337 - 1016 \times 337$ 的值

Find the value of $2016 \times 337 - 1016 \times 337$.

- 10) 小馬每天吃飯的時間是小奧的 8 倍，若小馬每天比小奧多吃 14 小時，問小馬一天用多少小時吃飯？

The dining time of Mason each day is 8 times than that of Leo. If Mason's dining time is 14 hours longer than that of Leo. How many hours does Mason used for eating every day?

- 11) 在算式 $A \times B = C$ 中，如果 A 增加 6， B 不變， C 增加 24； B 減少 2， A 不變， C 減少 50。

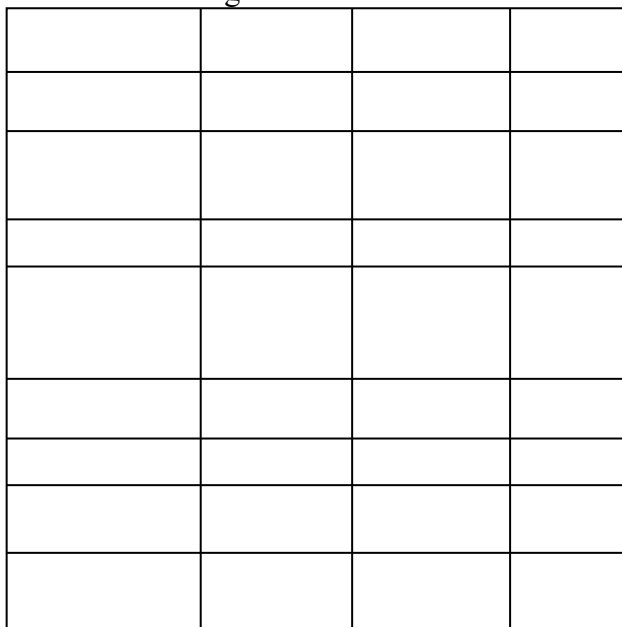
問 $A - B$ 是多少？

Given a multiplication $A \times B = C$. If we increase A by 6 while B is unchanged, C is increased by 24.

If we decrease B by 2 while A is unchanged, C is decreased by 50. Find the value of $A - B$.

- 12) 附圖中有多少個長方形？

How many are rectangles are there in the figure below?



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) 太偉原本比小樸多 26 元。他們之後去購物。

他們買了以下的物品：

i) 太偉買了 3 支汽水、小樸買了 5 枝。

ii) 太偉買了 4 枝雪條、小樸買了 6 枝。

最後太偉比小樸多 42 元，若一枝雪條比一支汽水貴 2 元，問一支汽水值多少？

At the beginning, David has \$26 more than that of Poppy, then they went shopping :

i) David bought 3 bottles of coke, Poppy bought 5 bottles

ii) David bought 4 ice-cream bars , Poppy bought 6

In the end David has \$42 more than that of Poppy. If an ice-cream bar is \$2 more expensive than that of coke, what is the price of a bottle of coke?

- 18) 小明錢包中有一些錢，每一天早上他都會：

將自己的錢分成等值的三份、將其中一份放進撲滿中，再將兩元放進撲滿中。若他在第一天的下午用了 7 元、第二天上午用了 4 元、第三天在中午用了 8 元。三天後的晚上他剩下了 6 元。

問他三天後撲滿多了多少錢？

Charles have some money. In each morning, Charles will do the following :

Separate the money into three piles of equal value, put one pile into the piggy bank, then put \$2 into the piggy bank. It is also known that in the afternoon he spent \$7, \$4 and \$8 in the first, second and the third day. At the night in the third day, he has \$6 left. How much is saved in the piggy bank by then?

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。

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.