

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 35 的正因數數目。
Find the number of positive factors of 35.
- 2) 求 35 的所有正因數之和。
Find the sum of all positive factors of 35.
- 3) 若兩個正整數之和為 22，兩數的組合有多少種？（1+21 與 21+1 只計一組）
If the sum of two positive integers is 22, how many combinations of these two numbers are there? (1+21 and 21+1 are counted as 1 combination only)
- 4) 在 1 至 36 這 36 個自然數中最少任意挑出多少個，才必定有兩個數的差是 18？
Among the 36 natural numbers from 1 to 36, at least how many numbers have to be picked so that there must be 2 numbers whose difference is 18?
- 5) 求 $19 \times 20 \times 21$ 除以 9 的餘數。
Find the remainder when $19 \times 20 \times 21$ is divided by 9.
- 6) 求以下算式的值。
Find the value of the following expression.
 $11 \times 34 + 66 \times 11$
- 7) 只用「+」或「-」填在橫線上使以下等式成立。（請在答題紙上順序寫上符號）
Fill in “+”(s) or “-”(s) in the blanks to make the calculation below valid. (Please write down the symbols in order on the answer sheet)
 $1 _ 2 _ 3 _ 4 _ 5 _ 6 = 13$
- 8) 哥哥、弟弟原來共有糖 127 粒，哥哥把自己的一半數量糖果給了弟弟，弟弟吃了 16 粒之後，弟弟把 24 粒糖還給哥哥，最後哥哥的糖果是弟弟的 2 倍。那麼弟弟原來有多少粒糖果？
Two brothers have 127 candies. The elder brother gives the younger brother half of his candies. The younger brother, after eating 16 candies, returns 24 candies to the elder brother. It ends up that the number of candies of the elder brother is twice of that of the younger brother. How many candies does the younger brother have in the beginning?

~ 甲部完 ~
~ End of Section A ~

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乙部：每題 5 分

Section B – each question carries 5 marks

- 9) 5 袋白米、6 袋黃豆和 9 袋紅豆共重 50 公斤，而 17 袋白米、18 袋黃豆和 27 袋紅豆共重 200 公斤，那麼一袋白米重多少公斤？
5 bags of rice, 6 bags of soybeans and 9 bags of red beans weigh 50 kilograms, while 17 bags of rice, 18 bags of soybean and 27 bags of red beans weigh 200 kilograms. So how many kilograms does 1 bag of rice weigh?

- 10) 陰影部分是一個正方形，最大長方形的周界是多少厘米？
The shaded part is a square. How many centimetres is the perimeter of the largest rectangle?

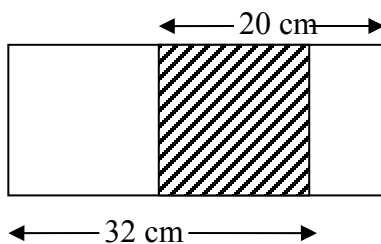


圖 10.1
Figure 10.1

- 11) 小朗以每小時 25 公里的速度追小日。開始時小日在小朗前面 3 公里處。若小朗 12 分鐘後便追到小日，問小日平均每小時走多少公里？
Ronny runs after Sunny at a speed of 25 km/h. In the beginning, Sunny is 3 km ahead of Ronny. If Ronny manages to meet Sunny 12 minutes later, how many kilometres does Sunny run each hour?
- 12) 求以下算式的值。
Find the value of the following expression.
 $317 + 311 + 305 + \dots + 35 + 29 + 23$
- 13) 小明、小聰兩人合共 95 歲，小明比小聰歲數的 4 倍多 25 歲，求小明的年齡。
The ages of Mickey and Chesney add up to 95. The age of Mickey is 25 more than 4 times that of Chesney. Find the age of Mickey.
- 14) 一個七位數 $\overline{A2017A4}$ 可被 12 整除，求 A 的可能性之和。
A 7-digit number $\overline{A2017A4}$ is divisible by 12. Find the sum of possibilities of A.
- 15) 有兩個自然數，它們的和是 143，它們的積是 1080，求兩個數中較大的數。
There are two positive integers. Their sum is 143 and their product is 1080. Find the greater number among these two numbers.
- 16) 在 1 至 2000 這 2000 個自然數中最少任意挑出多少個，才必定有兩個數之和是 2017？
Among the 2000 natural numbers from 1 to 2000, at least how many numbers have to be picked at random so that there must be two numbers whose sum is 2017?

~ 乙部完 ~

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.

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~ End of Section B ~

請將答案寫在 **答題紙** 上。

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丙部：每題 7 分

Section C – each question carries 7 marks

- 17) 蜘蛛有 8 條腿，沒有翅膀；蜻蜓有 6 條腿，2 對翅膀；蟬有 6 條腿，1 對翅膀。現在有這三種昆蟲共 27 隻，它們共有腿 180 條和翅膀 25 對。蟬有多少隻？

A spider has 8 legs but no wings; A dragonfly 6 legs and 2 pairs of wings; A Cicadas 6 legs and 1 pair of wings. Now there are 27 insects of these three kinds. They have 180 legs and 25 pairs of wings in total. How many cicadas are there?

- 18) 若某數能被 26 整除，求該數除以 91 的餘數的最大可能值。

If a number is divisible by 26, find the largest possible value of the remainder when that number is divided by 91.

- 19) 一個項數多於 10 的等差數列，將每一項都加上同一個數，結果等差數列的和增加了 111，求項數的所有可能值之和。

For an arithmetic sequence of more than 10 terms, each term is added by the same number. It ends up that the sum of the arithmetic sequence is increased by 111. Find the sum of all possible values of the number of terms.

- 20) 圖 20.1 是一些編了號碼的小格子，若依同樣規律繼續鋪蓋格子並編到 2017，求剛好在 127 上方的格子中的數字。

Figure 20.1 shows some numbered squares. If squares are to be tiled up to 2017 following the pattern, find the number in the square which is just above 127.

13	12	11	10	25
14	3	2	9	24
15	4	1	8	23
16	5	6	7	22
17	18	19	20	21

圖 20.1

Figure 20.1

~ 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.