



MathConceptition

2019

P4

Question Booklet

問題簿

Name:

姓名：

Reg. No.:

登記編號：

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Time: 1 hour

Calculators are NOT permitted.

Instructions:

1. DO NOT OPEN THIS QUESTION BOOKLET UNTIL YOU ARE TOLD TO DO SO.
2. Write your name and registration number on the cover of this question booklet.
3. Please use a pencil and write your answers neatly ONLY on the answer sheet provided. DO NOT write or draw in the circle next to each answer box. No mark will be given if you failed to follow this instruction.
4. If the information printed on your answer sheet is not correct, please inform the invigilator immediately.
5. Rough-work sheets provided will be collected at the end of the contest but they will not be marked.
6. Diagrams in this question booklet are not necessarily drawn to scale.

限時：1小時

不允許使用計算機。

考生須知：

1. 未宣布開始前，切勿翻閱此問題簿。
2. 請在此問題簿封面的適當位置寫上你的姓名及登記編號。
3. 所有答案必須寫在答題紙內，並須用鉛筆作答。請勿填寫或畫花題號後方的圓圈，否則該題答案將會作廢。
4. 請核對答題紙上列出的資料是否與你相符。如有問題，請舉手。
5. 比賽完結時監考員會收回桌上的草稿紙，但草稿紙上所書寫的任何文字或圖表將不獲評閱。
6. 此問題簿的附圖不一定依比例繪成。

- 1) $3469 + 4531 = ?$ [1%]
- 2) $8275 - 4999 = ?$ [1%]
- 3) $4 \times 9 \times 5 = ?$ [1%]
- 4) $26 \times 8 = ?$ [1%]
- 5) $72 \div 4 = ?$ [1%]
- 6) $333 \div 9 = ?$ [1%]
- 7) $45 \times 54 = ?$ [1%]
- 8) $1001 \div 13 = ?$ [1%]
- 9) $32 \times 8 - 100 \div 5 = ?$ [1%]
- 10) $1000 \div (209 - 12 \times 7) = ?$ [1%]
- 11) $75 \times (46 + 204 \div 6) = ?$ [1%]
- 12) $258 + 657 \div 27 \times 27 = ?$ [1%]

13) Evaluate $\frac{7}{13} + \frac{11}{13} + \frac{9}{13}$. (Give your answer in fraction.) [1%]

計算 $\frac{7}{13} + \frac{11}{13} + \frac{9}{13}$ 。(答案以分數表示。)

14) Evaluate $8 - 2\frac{3}{10} - 3\frac{9}{10}$. (Give your answer in fraction.) [1%]

計算 $8 - 2\frac{3}{10} - 3\frac{9}{10}$ 。(答案以分數表示。)

15) Evaluate $1\frac{8}{15} - \left(3\frac{11}{15} - 2\frac{13}{15}\right)$. (Give your answer in fraction.) [1%]

計算 $1\frac{8}{15} - \left(3\frac{11}{15} - 2\frac{13}{15}\right)$ 。(答案以分數表示。)

- 16) John can solve 32 math problems every day. How many days does he need to solve 1056 math problems? [2.0%]

小明每天做 32 題數學題，問他需要多少天才能完成 1056 題數學題？

- 17) Ada's height is 169 cm, which is 32 cm shorter than Billy. If Billy's height is 3 times that of Carmen, find Carmen's height in cm. [2.1%]

甲的身高是 169 厘米，比乙矮 32 厘米，而乙的身高是丙的 3 倍。問丙的身高是多少厘米？

- 18) Find the Least Common Multiple of 18 and 24. [2.2%]

求 18 和 24 的最小公倍數。

- 19) Find the Highest Common Factor of 30, 45 and 60. [2.3%]

求 30、45 和 60 的最大公因數。

- 20) The perimeter of a rectangle is 72 cm. Its length is 19 cm. What is the width of the rectangle in cm? [2.4%]

一個長方形的周界是 72 厘米，長是 19 厘米，問闊是多少厘米？

21) Which quadrilateral has 1 pair of parallel sides [2.5%]
only?

哪一種四邊形只有一組對邊平行？

22) Find the sum of all the factors of 64. [2.6%]

64 的所有因數之和是多少？

- 23) A bus is $6\frac{11}{12}$ m longer than a car while the car is $8\frac{7}{12}$ m shorter than a lorry. If the bus is $11\frac{5}{12}$ m long, how long is the lorry in m? [2.7%]

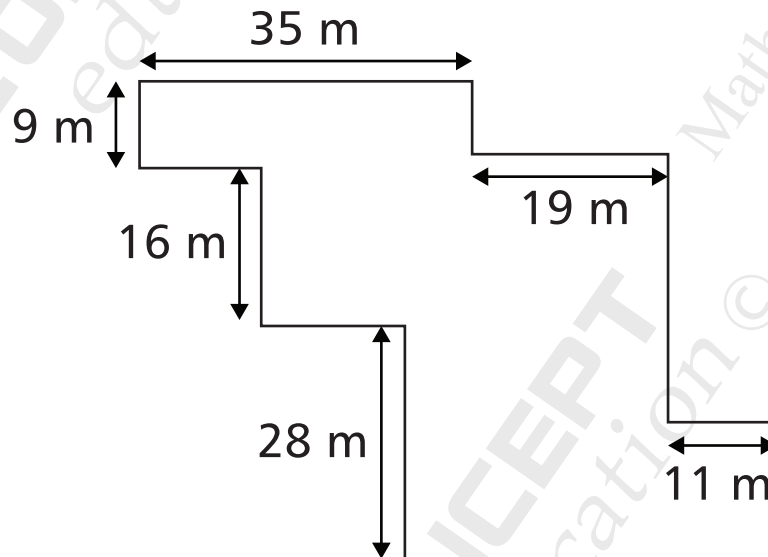
巴士車身長 $11\frac{5}{12}$ 米，比私家車長 $6\frac{11}{12}$ 米。若私家車比貨車短 $8\frac{7}{12}$ 米，問貨車長多少米？

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- 24) A chicken weighed 4 kg. After eating $2\frac{1}{8}$ kg of it, [2.8%]
how much heavier is the part eaten than the remaining part in kg?

有雞肉 4 公斤，吃去 $2\frac{1}{8}$ 公斤後，問吃去的雞肉比餘下的多幾公斤？

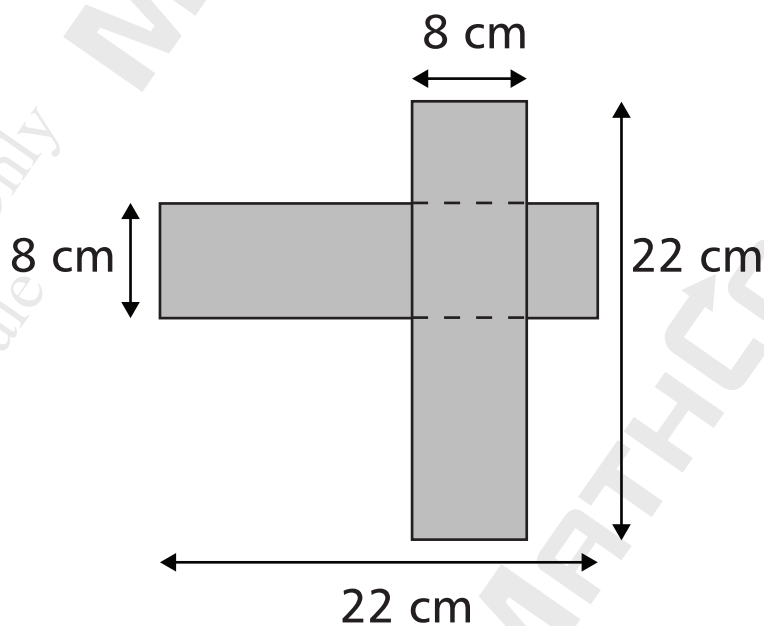
- 25) What is the perimeter of the figure below in m? [2.9%]

以下圖形的周界是多少米？



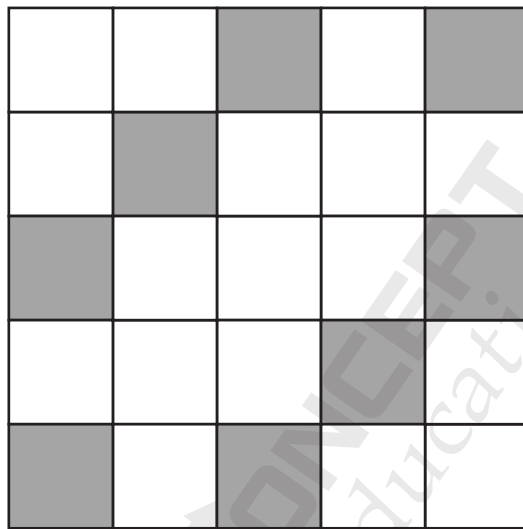
- 26) What is the area of the figure below in cm^2 ? [3.0%]

以下圖形的面積是多少平方厘米？



- 27) How many line(s) of symmetry are there in the figure below? [3.1%]

以下圖形有多少條對稱軸？



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- 28) If the 6-digit number 26A539 is divisible by 11, find the value of A. [3.2%]

如果六位數 26A539 可以被 11 整除，求 A 的數值。

- 29) Arrange the following fractions from the smallest to the largest. [3.3%]

把下列分數由小至大排列出來。

$$\frac{49}{66}, \frac{28}{45}, \frac{37}{54}$$

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- 30) Write $\frac{9}{125}$ as a decimal. [3.4%]

把 $\frac{9}{125}$ 寫成一個小數。

- 31) An integer has 3 factors P , Q and R only. [4.0%]
If $P < Q < R$, then $Q \times Q = ?$

某數只有三個因數 P 、 Q 、 R ，而且 $P < Q < R$ 。那麼 $Q \times Q = ?$

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- 32) How many 3-digit numbers are there so that the [4.1%]
sum of its digits is 5?

有多少個三位數的各個數字之和是 5 ?

- 33) There are two integers. Their sum is 53 and their difference is 15. Find the larger integer. [4.2%]

有兩個整數，它們的和是 53，而它們的差是 15。
求較大的整數。

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- 34) If the 5-digit number 492AB is divisible by 33, find the largest possible value of the 2-digit number AB. [4.3%]

如果五位數 492AB 可以被 33 整除，求兩位數 AB 的最大可能值。

- 35) From 1 to 2019, how many numbers are multiples of 12 but not multiples of 15? [4.4%]

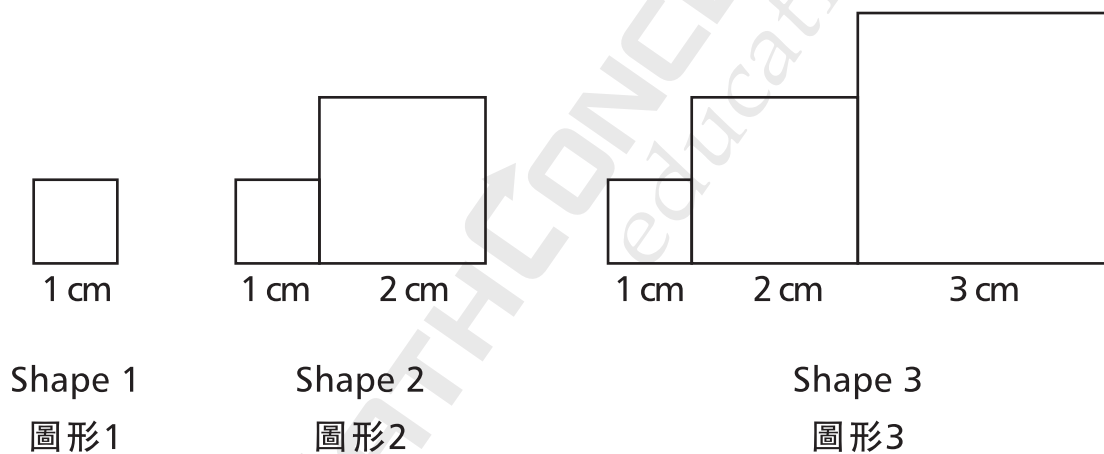
由 1 至 2019，有多少個數字是 12 的倍數，但不是 15 的倍數？

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- 36) 17 people are going to cross the river. There is a boat which can carry 3 people. At least 1 person is needed to paddle the boat and it takes 5 minutes for the boat to cross the river. If all of the people know how to paddle the boat, at least how many minutes are needed so that all of the people can cross the river? [4.5%]

17 個懂得划船的人要渡河，只有一艘可乘 3 人的小船。小船需要 1 人來划船。如果小船渡河需要 5 分鐘，讓所有人渡河最少需要多少分鐘？

- 37) Shape 1 is a square of side 1 cm. Shape 2 is formed by piecing Shape 1 with a square of side 2 cm. Shape 3 is formed by piecing Shape 2 with a square of side 3 cm, and so on. What is the perimeter of Shape 100 in cm? [4.6%]

如圖所示，圖形 1 是一個邊長是 1 厘米的正方形。圖形 2 是由圖形 1 和一個邊長是 2 厘米的正方形合併而成。圖形 3 是由圖形 2 和一個邊長是 3 厘米的正方形合併而成，如此類推。問圖形 100 的周界是多少厘米？



- 38) 3 boys and 5 girls are divided into 2 rows to take a photo. If the students with the same gender must be on the same row, find the number of ways to arrange the students. [4.7%]

3 位男生和 5 位女生分成兩行拍大合照。如果每行都只可以有相同性別的學生，問總共有多少種排列的方法？

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- 39) N is an integer. When 73, 199 or 346 is divided by N , the same remainder will be obtained. Find the largest possible value of N . [4.8%]

N 是一個整數，當 73、199 或 346 除以 N 的時候，餘數都是一樣。 N 最大是多少？

- 40) How many diagonals does a regular 10-sided polygon have? [4.9%]

一個正十邊形有多少條對角線？

End of paper
全卷完



REG NO			P4
NAME			
GROUP			
SEAT			

ANSWER SHEET

ANSWER		ANSWER		ANSWER		ANSWER	
1 8000	<input type="radio"/>	11 6000	<input type="radio"/>	21 梯形 Trapezium	<input type="radio"/>	31 R	<input type="radio"/>
2 3276	<input type="radio"/>	12 915	<input type="radio"/>	22 127	<input type="radio"/>	32 15	<input type="radio"/>
3 180	<input type="radio"/>	13 $2\frac{1}{13}$	<input type="radio"/>	23 $13\frac{1}{12}$	<input type="radio"/>	33 34	<input type="radio"/>
4 208	<input type="radio"/>	14 $1\frac{4}{5}$	<input type="radio"/>	24 $\frac{1}{4}$	<input type="radio"/>	34 69	<input type="radio"/>
5 18	<input type="radio"/>	15 $\frac{2}{3}$	<input type="radio"/>	25 236	<input type="radio"/>	35 135	<input type="radio"/>
6 37	<input type="radio"/>	16 33	<input type="radio"/>	26 288	<input type="radio"/>	36 75	<input type="radio"/>
7 2430	<input type="radio"/>	17 67	<input type="radio"/>	27 2	<input type="radio"/>	37 10300	<input type="radio"/>
8 77	<input type="radio"/>	18 72	<input type="radio"/>	28 4	<input type="radio"/>	38 1440	<input type="radio"/>
9 236	<input type="radio"/>	19 15	<input type="radio"/>	29 $\frac{28}{45} < \frac{37}{54} < \frac{49}{66}$	<input type="radio"/>	39 21	<input type="radio"/>
10 8	<input type="radio"/>	20 17	<input type="radio"/>	30 0.072	<input type="radio"/>	40 35	<input type="radio"/>