MathConception
2019

P5

Name:
姓名：

Reg. No.:
登記編號：

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。

Question Booklet

問題簿

1) 123 × 9 = ? [1%]

2) 114 ÷ 6 = ? [1%]

3) 672 ÷ 3 − 132 ÷ 3 = ? [1%]

4) 28 × 32 = ? [1%]

5) 1008 ÷ 18 = ? [1%]

6) 3.68 + 7.42 = ? [1%]

7) 5 − 2.718 + 3.14 = ? [1%]

8) 16 × 1.25 = ? [1%]

9) 0.075 × 0.32 = ? [1%]

10) 4000 × 0.000005 = ? [1%]

11) Evaluate $\dfrac{23}{36} + \dfrac{29}{36} - \dfrac{7}{36}$. (Give your answer in fraction.)   [1%]

計算 $\dfrac{23}{36} + \dfrac{29}{36} - \dfrac{7}{36}$ 。（答案以分數表示。）

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12) Evaluate $\dfrac{1}{6} - \dfrac{3}{8} + \dfrac{5}{9}$. (Give your answer in fraction.)   [1%]

計算 $\dfrac{1}{6} - \dfrac{3}{8} + \dfrac{5}{9}$ 。（答案以分數表示。）

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13) Evaluate $6\dfrac{7}{15} + 4\dfrac{1}{10} - 5\dfrac{11}{12}$. (Give your answer in fraction.)   [1%]

計算 $6\dfrac{7}{15} + 4\dfrac{1}{10} - 5\dfrac{11}{12}$ 。（答案以分數表示。）

14) Evaluate $2\dfrac{2}{5} \times 3\dfrac{1}{3}$. (Give your answer in fraction.) [1%]

計算 $2\dfrac{2}{5} \times 3\dfrac{1}{3}$ 。 (答案以分數表示。)

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15) Evaluate $2\dfrac{1}{10} \div 5\dfrac{3}{5}$. (Give your answer in fraction.) [1%]

計算 $2\dfrac{1}{10} \div 5\dfrac{3}{5}$ 。 (答案以分數表示。)

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16) Write down the number "four hundred million and twenty nine". [2.0%]

寫出「四億零二十九」代表的數字。

17) Correct 2 596 714 to the nearest ten thousand. [2.1%]

把 2 596 714 取至最接近的萬位。

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18) A pack of salt costs $2.80. The price of a pack of rice [2.2%]
is 6.5 times that of the salt. How much do a pack of
salt and a pack of rice cost altogether?

一包鹽售 2.8 元，一包米的售價是一包鹽的 6.5 倍。
問各買一包要多少元？

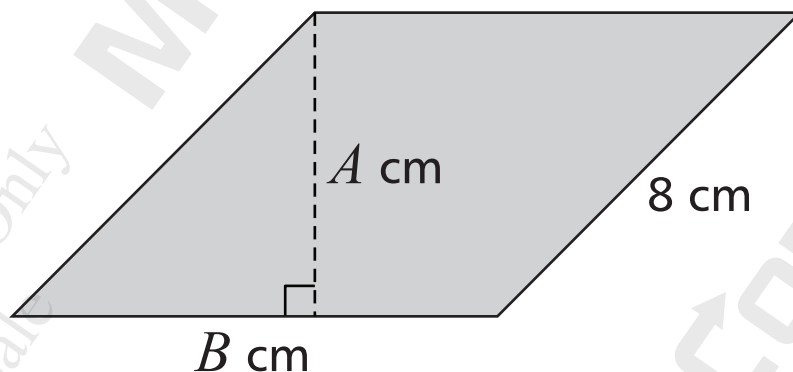
19) If $x - 25 = 36$, then what is $4x + 9$? [2.3%]

如果 $x - 25 = 36$，則 $4x + 9$ 是甚麼？

20) There are 75 students in a class. If $\dfrac{3}{5}$ of them are [2.4%] girls, how many boys are there in the class?

班上有 75 位同學，其中的 $\dfrac{3}{5}$ 是女生。問班上有男生多少位？

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21) Find the perimeter of the following parallelogram in [2.5%] cm. (Express your answer in algebraic expression.)
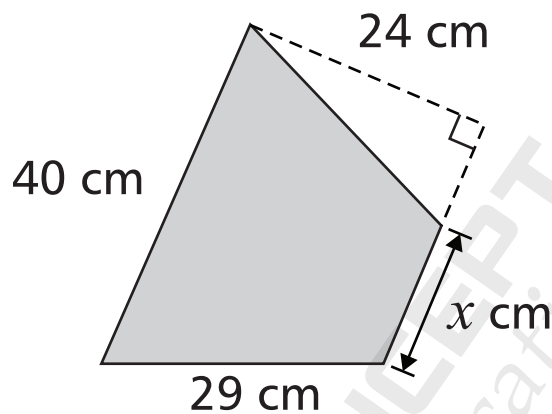
以下平行四邊形的周界是多少厘米？（答案用代數式表示。）

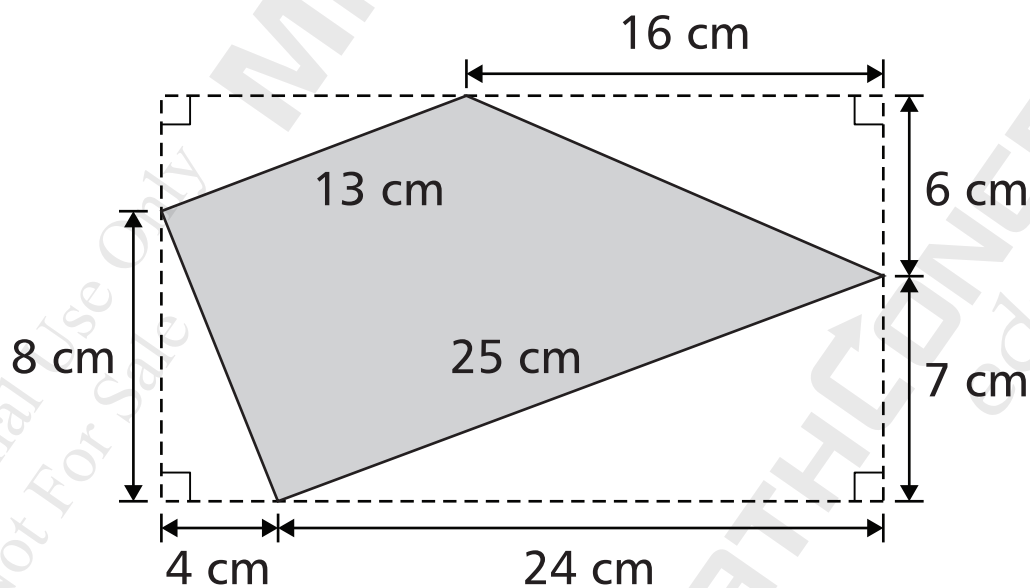**22)** The area of the following trapezium is 672 cm².   [2.6%]
Find x.

以下梯形的面積是 672 cm^2，求 x。

24 cm

40 cm

x cm

29 cm

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23) Find the shaded area in cm².   [2.7%]

圖中著色部分的面積是多少平方厘米？

16 cm

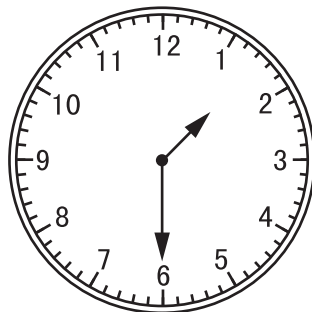13 cm

6 cm

8 cm

25 cm

7 cm

4 cm   24 cm

24) The dimensions of a rectangular card are 72 cm by   [2.8%]
56 cm. If a largest possible triangle is cut from the card,
what is the area of the triangle in cm²?

在一張長 72 厘米，闊 56 厘米的長方形咭紙上剪出一
個最大的三角形，問三角形的面積是多少平方厘米？

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25) John puts a clock on a table. If the hour hand is   [2.9%]
pointing towards north, which direction is the
minute hand pointing towards?

小明把時鐘鐘面向上平放在桌上。時鐘的時針指向北
方。時鐘的分針指向哪一方？

26) Find the product of the two largest prime numbers within 100. 　[3.0%]

求 100 以內最大的兩個質數之積。

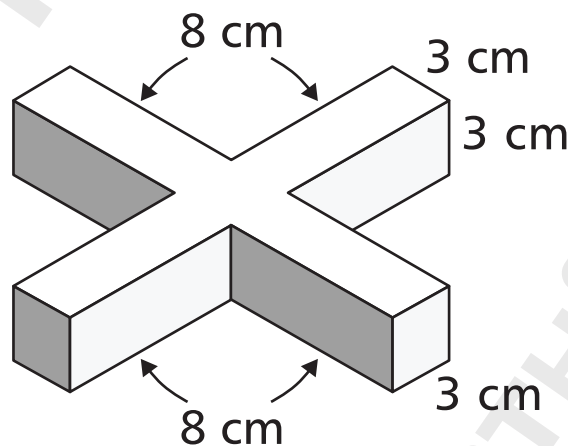**27)** Which 3-D shape has 10 edges and 6 vertices? 　[3.1%]

哪一個立體圖形有 10 條棱和 6 個頂？

28) There are $10\frac{2}{15}$ kg of watermelons and coconuts on a truck. The weight of the watermelons are $3\frac{3}{4}$ times that of the coconuts. How heavy are the coconuts on the truck in kg? [3.2%]

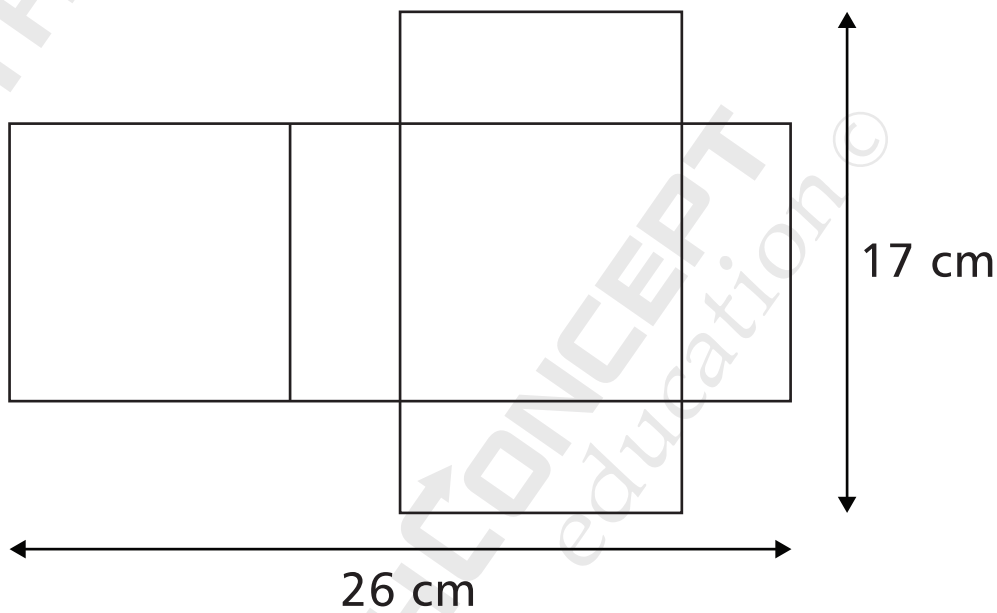貨車載了共重 $10\frac{2}{15}$ 公斤的西瓜和椰子。若車上的西瓜的重量是椰子的 $3\frac{3}{4}$ 倍，問貨車上的椰子重多少公斤？

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29) Find the volume of the following shape in cm³. [3.3%]

以下立體圖形的體積是多少立方厘米？

30) The net of a square prism is shown below. Find its [3.4%] volume in cm³.

下圖是一個底是正方形的柱體的摺紙圖樣，它的體積是多少立方厘米？

17 cm

26 cm

31) The time now is 09 : 00. What is the time after 2800   [4.0%]
hours? (Give your answer in 24-hour time.)

現在的時間是 09：00，2800 小時後的時間是甚麼？
（答案以 24 小時制表示。）

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32) There are only chickens and rabbits in a barn. A   [4.1%]
farmer has counted 40 heads and 106 legs. How
many chickens are there in the barn?

農場裡有一些雞和一些兔，農夫數到有 40 個頭和 106
隻腳。問農場裡有多少隻雞？

33) Find the value of 1 + 2 + 3 + … + 2018 + 2019. [4.2%]

求 1 + 2 + 3 + … + 2018 + 2019 的值。

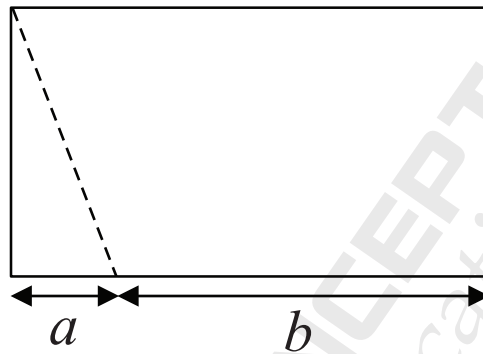**34)** Simplify the following fraction. [4.3%]

化簡以下分數。

$$\cfrac{1}{1-\cfrac{1}{2-\cfrac{1}{3-\cfrac{1}{4}}}}$$

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35) If the sum of three prime numbers is 50, what is the least possible value of the product of the three prime numbers? [4.4%]

如果三個質數之和是 50，那麼這三個質數之積最少是多少？

36) In the figure (not drawn to scale), the dashed line [4.5%] divides the area of the rectangle in the ratio 1 : 6. What is the ratio $a : b$?

圖中（ 不依比例繪成 ）虛線把長方形分成兩部分，兩部分面積的比例為 1 : 6 。 問 $a : b$ = ？

$$a \qquad b$$

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37) If each letter represents a different digit, then which [4.6%] 5-digit number does "ABCDE" represent?

在下式中，各英文字母表示一個不同的數字。 問「ABCDE」代表哪一個五位數？

$$
\begin{array}{ccccc}
 &   & A & B & C \\
\times &   & A & B & D \\
\hline
 B & E & E & B & C \\
+ &   &   & D & C \\
\hline
 B & E & D & E & E \\
\end{array}
$$

38) There are some candies. If the candies are shared [4.7%] among 15 children, 6 candies will be left. If the candies are shared among 18 children, 9 candies will be left. If the candies are shared among 20 children, 11 candies will be left. Given that the number of candies is less than 1000, find the maximum possible number of candies.
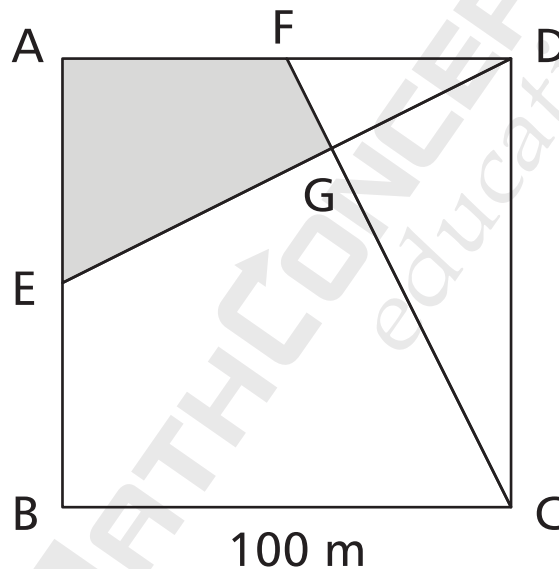
有一些糖果，如果平均分給 15 位小朋友，會餘下 6 粒；如果平均分給 18 位小朋友，則餘下 9 粒；如果平均分給 20 位小朋友，則餘下 11 粒。已知糖果的數量少於 1000 粒，問這些糖果最多有多少粒？

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39) Given that x and y are integers. At the time y minutes [4.8%] past x in the morning, the angle formed by the minute hand and the hour hand is 100°. Find the least possible value of $x + y$.

已知 x 和 y 都是整數，而且在上午 x 時 y 分的時候，時針和分針形成的角度是 100°。求 $x + y$ 的最小可能值。

40) In the figure, ABCD is a square of side 100 m. E and [4.9%]
F are the midpoints of AB and AD respectively. CF
and DE intersect at G. Find the shaded area in m².

圖中，ABCD 是一個邊長為 100 米的正方形。E 和 F
分別是 AB 和 AD 的中間點。CF 和 DE 相交於 G。問
陰影部分的面積是多少平方米？

End of paper
全卷完

REG NO	
NAME	
GROUP	
SEAT	

P5

ANSWER SHEET

	ANSWER			ANSWER			ANSWER			ANSWER	
1	1107	○	11	$1\frac{1}{4}$	○	21	2(B + 8)	○	31	01:00	○
2	19	○	12	$\frac{25}{72}$	○	22	16	○	32	27	○
3	180	○	13	$4\frac{13}{20}$	○	23	186	○	33	2039190	○
4	896	○	14	8	○	24	2016	○	34	$2\frac{4}{7}$	○
5	56	○	15	$\frac{3}{8}$	○	25	東南 SE	○	35	430	○
6	11.1	○	16	400 000 029	○	26	8633	○	36	2 : 5	○
7	5.422	○	17	2 600 000	○	27	五角錐體 Pentagonal pyramid	○	37	28510	○
8	20	○	18	21	○	28	$2\frac{2}{15}$	○	38	891	○
9	0.024	○	19	253	○	29	315	○	39	27	○
10	0.02	○	20	30	○	30	324	○	40	2000	○

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