

2020 香港 數學盃
Hong Kong Mathematics Cup 2020
全港綜合數學能力大賽



P2

問題簿

Question
Booklet

姓名 Name : _____	參賽者編號 Reg No : <table border="1"><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>					

限時：40分鐘

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參賽者編號。
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. 問題簿的附圖不一定依比例繪成。

Time : 40 minutes

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.

Part 1 Calculation 運算題

1. $8126 = 8000 + 100 + \underline{\quad?} + 6$ [2 marks]

2. $6 \times 8 = ?$ [2 marks]

3. $503 - 29 = ?$ [2 marks]

4. $\underline{\quad?} - 283 = 195$ [2 marks]

5. $38 \div 7 = \underline{\quad} \dots \underline{\quad}$ [2 marks]

6. $99 - 299 + 369 = ?$ [2 marks]

7. $2020 \times 1 = ?$ [2 marks]

8. $163 + 498 + 137 = ?$ [2 marks]

Please turn over the page.

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Part 2 Fundamental Questions 基礎題

9. Today is Sunday. After 66 days, 今天是星期日，再過 66 天 [3 marks]
what day is it? 後是星期幾？
10. Nick is watching sunrise. 小力在看日出。小美在小力 [3 marks]
Mandy stands on the right of 的右邊面向着小力。小美面
Nick and facing Nick. Which 向哪個方向？
direction does Mandy face?
11. A doll costs 6 dollars. A bottle 一個娃娃售 6 元。一瓶水售 [3 marks]
of water costs 8 dollars. Betty 8 元。小花付一張 500 元紙
pays a 500-dollar banknote to 幣去買 9 個娃娃，應找回多
buy 9 dolls. How much is 少元？
changed?
12. If $\odot \times \odot = 9 + 9 + 9 + 9$, 如果 $\odot \times \odot = 9 + 9 + 9 + 9$, [3 marks]
then $\odot = ?$ 那 $\odot = ?$

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13. A company has 456 male workers. Female workers are 114 fewer than male workers. How many workers are there in the company in total? 某公司有 456 名男員工。女員工比男員工少 114 人。公司裏共有員工多少名？ [3 marks]
14. The teacher has 51 marbles. If she gives the marbles to 8 students equally with no marbles left, at least how many more marbles does she need? 某老師有彈珠 51 粒。若她想把彈珠平分給 8 名學生而沒有剩餘，她至少要多多少粒彈珠？ [3 marks]
15. What is the difference between the largest 3-digit even number and the largest 2-digit number? 最大的三位雙數和最大的兩位數之差是多少？ [3 marks]

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16. $9\text{ m } 9\text{ cm} - 90\text{ cm} =$

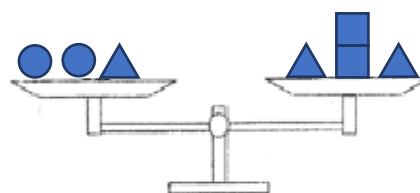
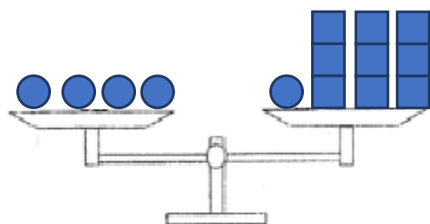
___?___ cm



9 米 9 厘米 - 90 厘米 = [3 marks]



___?___ 厘米

17. Read the balance below and answer.

閱讀以下天平並回答問題。 [3 marks]



If the  weighs 5 grams, then  weighs ___?___ grams.

若重 5 克，則重 ___?___ 克。

18. It is 11:46 a.m. now. 3 hours and 28 minutes later, what time will it be? Give your answer in digital clock format.

現在是上午 11 時 46 分。3 小時 28 分鐘之後是幾時幾分？以數字鐘形式表示答案。 [3 marks]

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Part 3 O Math Questions 奧數題

19. 4, 1, 2, 5, 4, 1, 2, 5 ... is a sequence of numbers. What is the 67th number in the sequence?
 [4.5 marks]

4, 1, 2, 5, 4, 1, 2, 5 ... 是一列數。這列數的第 67 個是多少？

20. It is given that $\triangle + \circ + \diamond = 17$, $\triangle + \diamond = 13$, $\triangle + \circ = 12$. Then $\triangle = ?$
[4.5 marks]

已知 $\triangle + \circ + \diamond = 17$, $\triangle + \diamond = 13$, $\triangle + \circ = 12$ 那麼 $\triangle = ?$

21. Read the pattern and answer.
 [4.5 marks]

30, 15, 14, 7, 6, ★, ☆

看規律，回答下題。

30, 15, 14, 7, 6, ★, ☆

Then $\star + \star = ?$
[4.5 marks]

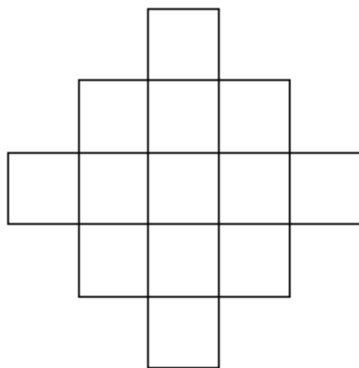
那麼 $\star + \star = ?$

22. $101 + 202 + 303 + 404 + 505 + 606 + 707 + 808 + 909 + 1010 = ?$
[4.5 marks]

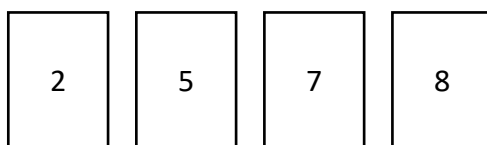
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23. How many squares are there in the figure below? 下圖有多少個正方形？ [4.5 marks]



24. How many different 3-digit numbers can be formed with the number cards below? 以下的數字卡可組成多少個不同的三位數？ [4.5 marks]



25. A clock rings for 4 times in 12 seconds. How many seconds does the clock need to ring for 6 times? 時鐘敲 4 下用了 12 秒，敲 6 下用了多少秒？ [4.5 marks]

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26. Wendy has a total of 40 hens and ducks. There are 12 more hens than ducks. How many hens does Wendy have? 小雲有雞、鴨共 40 隻。雞比鴨多 12 隻。雞有多少隻？ [4.5 marks]
27. A snail climbs 30 centimetres in 6 minutes. How many centimetres does the snail climb in 9 minutes? 一隻蝸牛花了 6 分鐘爬行 30 厘米。這隻蝸牛 9 分鐘爬行多少厘米？ [4.5 marks]
28. How many ways are there to break 10 into a sum of three different numbers (except 0)? 把 10 分拆成三個不同的數相加的形式 (0 除外)，共有多少種不同的分拆方法？ [4.5 marks]

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29. Jacky has 388 stickers originally. He gives 126 stickers to Miki, then Miki has 38 more stickers than Jacky. How many stickers does Miki have originally? [4.5 marks]
- 小杰原有貼紙 388 枚。他把 126 枚送給小美後，小美比小杰有多貼紙 38 枚。小美原有貼紙多少枚？
30. There are 2 big boxes. Each big box contains 4 middle boxes. Each middle box contains 6 small boxes. How many big, middle and small are there in total? [4.5 marks]
- 有 2 個大盒子。每個大盒子有 4 個中盒子。每個中盒子有 6 個小盒子。大、中、小盒子共有多少個？

End of paper

全卷完