



奧冠教育中心

OLYMPIAD CHAMPION EDUCATION CENTRE

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世界國際數學競賽總決賽 2018

WORLD INTERNATIONAL MATHEMATICAL OLYMPIAD FINAL 2018

小學一年級 Primary 1

時限：120 分鐘

Time allowed: 120 minutes

試題

Question Paper

考生須知：

Instructions to Contestants:

1. 本卷包括 試題 乙份，試題紙不可取走。
Each contestant should have ONE Question-Answer Book which CANNOT be taken away.
2. 本卷共 5 個範疇，每範疇有 6 題，共 30 題，每題 5 分，總分 150 分，答錯不扣分。
There are 5 exam areas and 6 questions in each exam area. There are a total of 30 questions in this Question-Answer Book. Each carries 5 marks. Total score is 150 marks. No points are deducted for incorrect answers.
3. 請將答案寫在 答題紙 上。
All answers should be written on ANSWER SHEET.
4. 比賽期間，不得使用計算工具。
NO calculators can be used during the contest.
5. 本卷中所有圖形不一定依比例繪成。
All figures in the paper are not necessarily drawn to scale.
6. 比賽完畢時，本試題會被收回。
This Question-Answer Book will be collected at the end of the contest.

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. Marks will NOT be given for incorrect unit.

請將答案寫在

 上。

All answers should be written on the ANSWER SHEET.

本試題不可取走。

THIS Question-Answer Book 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-Answer Book without approval of the examiner.

Otherwise, contestant may be **DISQUALIFIED**.

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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填空題 (第 1 至 30 題) (每題 5 分 , 答錯及空題不扣分)

Open-Ended Questions (1st ~30th) (5 points for correct answer, no penalty point for wrong answer)

Logical Thinking

邏輯思維

1. According to the pattern shown below, what is the number in the blank?

按以下規律，求在橫線上的數字。

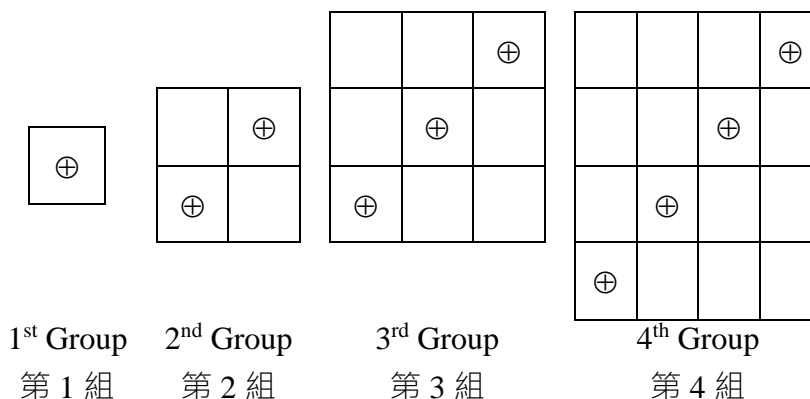
14 、 18 、 22 、 26 、 30 、 34 、 、

2. Father is 56 years old and mother is 41 years old. What is the difference between their ages this year?

爸爸今年 56 歲，媽媽今年 41 歲，他們今年相差多少歲？

3. According to the pattern shown below, how many \oplus is / are there in the 100th group?

按以下規律，問第 100 組有多少個 \oplus ？



Question 3

第 3 題

4. Amy is in a queue buying some food. There are 13 people in front of her and 12 people at her back. How many people are in the line?

艾美正在餐廳排隊買食物，她前面有 13 人，而她後面有 12 人。問共有多少人正在排隊？

5. If yesterday was Saturday, which day of the week will the day after tomorrow be?

昨天是星期六，問後天是星期幾？

6. Move one match to make the equation below correct. (Write down the complete equation in the answer sheet)

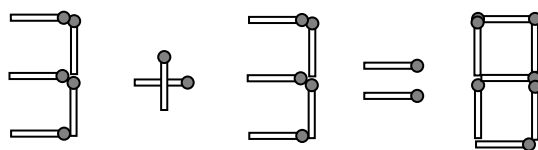
移動一根火柴使算式使立。(在答題紙上寫上完整算式)

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。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. Marks will NOT be given for incorrect unit.

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Question 6

第 6 題

Arithmetic

算術

7. Find the value of $2+9+3+4+6+7+1+8+5+5$.

求 $2+9+3+4+6+7+1+8+5+5$ 的值。

8. Find the value of $17-7+12$.

求 $17-7+12$ 的值。

9. Find the value of $3-3+3-3+3-3+3-3+3-3$.

求 $3-3+3-3+3-3+3-3+3-3$ 的值。

10. Find the value of $21-40+49$.

求 $21-40+49$ 的值。

11. What is the number that should be filled in the blank if the equation below is correct?

在以下算式填上甚麼數字會使算式正確？

$$13 + \underline{\hspace{2cm}} + 59 - 49 = 32$$

12. If A is a 1-digit number, what is the value of A if the equation is correct?

若 A 為 1 位數字，且以下算式正確，求 A 的值。

$$1 \quad 2 \quad - \quad \boxed{A} \quad = \quad \boxed{A}$$

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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Number Theory

數論

13. Now the light is off. Amy presses the light button 14 times. Can you guess whether the light is on or off?
現時燈是熄的，艾美按燈掣 14 次，請猜猜現時燈是亮或熄的。

14. Fill the lines with ‘+’ and ‘-’ to make the equation below correct. How many possible outcome(s) is / are there?

在橫線上填上加號或減號，使下列算式正確，請問有多少個可能性？

$$1 \quad \underline{\quad} \quad 1 \quad \underline{\quad} \quad 3 \quad \underline{\quad} \quad 4 \quad = \quad 1$$

15. Fill the lines with ‘+’ and ‘-’ to make the equation below correct. (Write down the complete equation in the answer sheet)

在橫線上填上加號或減號，使下列算式正確。(在答題紙上寫上完整算式)

$$9 \quad \underline{\quad} \quad 8 \quad \underline{\quad} \quad 6 \quad = \quad 7$$

16. How many odd number(s) which is / are smaller than 32 is / are there?

有多少個比 32 小的奇數？

17. According to the pattern shown below, what is the number in the space provided?

按以下規律，橫線上的數字應該是甚麼？

2, 6, 10, 14,

18. Determine the result of $1+5+9+13+17+21+25+29$ is odd or even?

判斷 $1+5+9+13+17+21+25+29$ 的結果是奇數 (單數) 還是偶數 (雙數)。

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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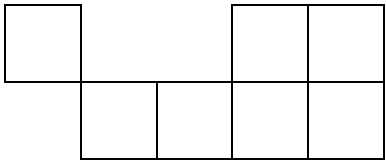
All answers should be written on the ANSWER SHEET.

Geometry

幾何

19. How many square(s) is / are there in the figure below?

請問下圖有多少個正方形？

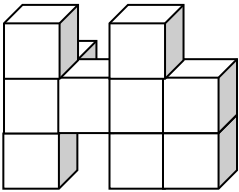


Question 19

第 19 題

20. At least how many cube(s) is / are there in the figure below?

下圖最少由多少個立方體組成？

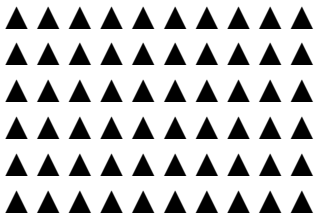


Question 20

第 20 題

21. How many triangle(s) is / are there in the figure below?

下圖有多少個三角形？



請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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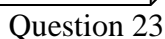
第 21 題

- 參考附圖，這個立體有多少個面？



第 22 題

- 參考附圖，這個立體有多少個頂點？



第 23 題

- 按以下規律，橫線上的圖案應該是甚麼？



第 24 題

組合數學

- 將 24 粒波子分成 4 等份，每份有多少粒波子？

26. What is the largest 3-digit number by choosing 3 numbers from 3, 5 and 7? (Each number can be used for more than one time)

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. 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.

從 3、5 和 7 選取 3 個數字組合成最大的三位數是多少？（每個數字可重複使用）

27. According to the following numbers, how many odd number(s) is / are there?

求下列這些數中，有多少個奇數？（奇數即是單數）

27, 28, 29, 30, 32, 35, 36, 41

28. Which number below is the smallest?

下列哪一個數的值最小？

20181216 、 20181229 、 20180221 、 20191230

29. According to the following numbers, which odd number is the largest?

求下列這些數中，哪一個是最大的奇數？（奇數即是單數）

143 、 452 、 89 、 9228 、 327 、 2587 、 468

30. Amy had 7 apples. Her mother then gave Betty 14 apples and Betty gave Amy 13 apples. Finally how many apple(s) did Amy have?

艾美原有 7 個蘋果，媽媽給貝蒂 14 個蘋果，貝蒂給艾美 13 個蘋果，最後艾美有多少個蘋果？

~ 全卷完 ~

~ End of Paper ~

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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