



奧冠教育中心

OLYMPIAD CHAMPION EDUCATION CENTRE

Room 309-310, 8 Jordan Road, Yau Ma Tei, Kowloon, Hong Kong SAR, CHINA

Tel (852) 3153 2028 / 9310 1240 Fax (852) 3153 2074

Website: www.olympiadchampion.com Email: olympiadchampion@gmail.com



泰國國際數學競賽初賽 2020 - 2021

**THAILAND INTERNATIONAL
MATHEMATICAL OLYMPIAD
HEAT ROUND 2020 - 2021**

幼稚園組 Kindergarten Group

時限：90 分鐘

Time allowed: 90 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 5 題，共 25 題，每題 4 分，總分 100 分，答錯不扣分。

There are 5 exam areas and 5 questions in each exam area. There are a total of 25 questions in this Question-Answer Book. Each carries 4 marks. Total score is 100 marks. No points are deducted for incorrect answers.

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.

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

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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.

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**.

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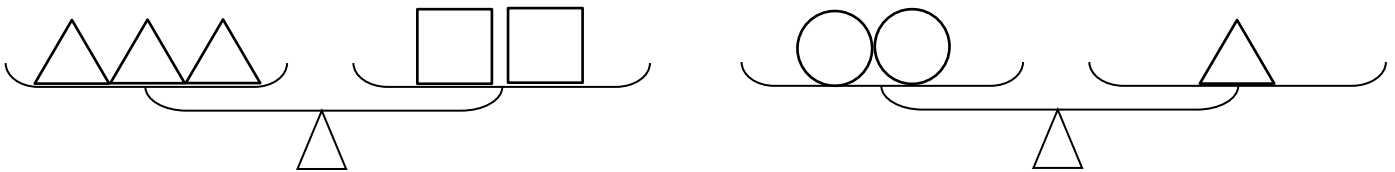
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Open-Ended Questions (1st ~25th) (4 points for correct answer, no penalty point for wrong answer)

Logical Thinking

1. In the figure below, there are 2 balances. Which of \bigcirc 、 \triangle 、 \square is the lightest?

Pada gambar di bawah ini, terdapat 2 timbangan. Manakah dari \bigcirc 、 \triangle 、 \square yang paling ringan?



Question 1

Soal No. 1

2. It is known as the password of “NINE” is “SNSJ”. What is the password for “TEN”?

Diketahui kata sandi dari “NINE” adalah “SNSJ”. Apakah kata sandi untuk “TEN”?

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3. If figure 2 is formed base on figure 1, what is the value of the number to represent “?” in figure 2?

Jika Gambar 2 dibentuk berdasarkan Gambar 1, bilangan berapakah yang seharusnya diisi pada “?” pada gambar 2?

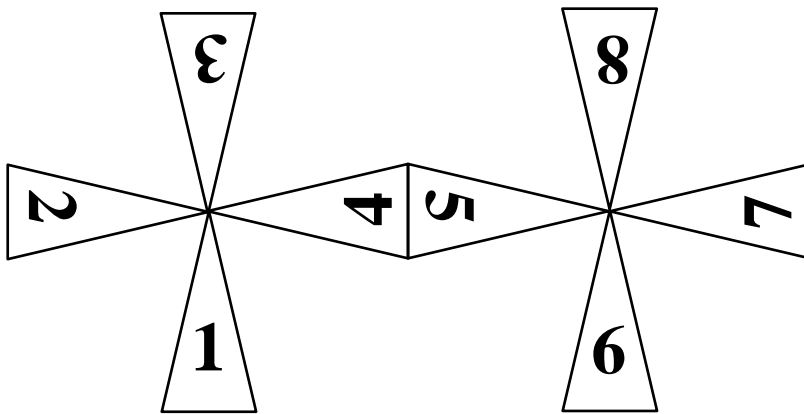


Figure 1
Gambar 1

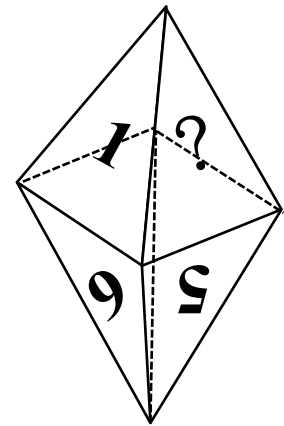


Figure 2
Gambar 2

Question 3

Soal No. 3

4. According to the pattern shown below, what is the English alphabet in the space provided?

Berdasarkan pola di bawah ini, huruf apakah yang seharusnya ada pada “__”?

G 、 h 、 I 、 j 、 K 、 __ 、

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。

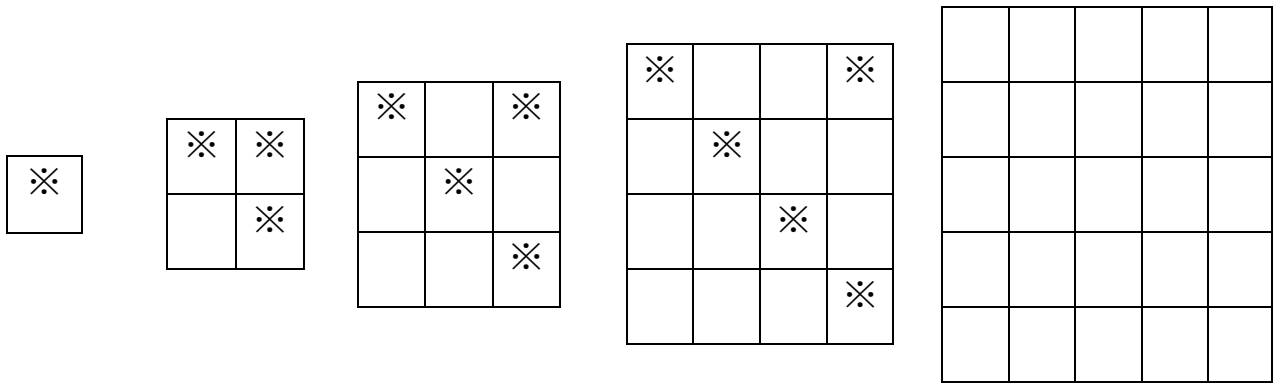
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5. According to the pattern shown below, how many ✖ is / are there in the 5th group?

Berdasarkan pola di bawah ini, berapa banyak ✖ yang ada pada Kelompok 5?



1st Group

2nd Group

3rd Group

4th Group

5th Group

Kelompok 1

Kelompok 2

Kelompok 3

Kelompok 4

Kelompok 5

Question 5

Soal No. 5

Arithmetic

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

Carilah nilai dari $2 + 5 + 9 + 8 + 1$.

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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7. Refer to the puzzle, find the value of A .

Berdasarkan soal di bawah ini, carilah nilai dari A .

$$\begin{array}{r} A \\ + A \\ \hline 5 \end{array}$$

8. Find the value of $18 - 7 - 3$.

Carilah nilai dari $18 - 7 - 3$.

9. Find the value of $8 + 7 - 6 + 5 + 4 - 3 + 2 + 1 - 0$.

Carilah nilai dari $8 + 7 - 6 + 5 + 4 - 3 + 2 + 1 - 0$

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

Jika A adalah sebuah bilangan 1-angka, berapakah nilai dari A jika persamaan di bawah ini benar?

$$2 \quad 5 \quad - \quad \boxed{A} \quad = \quad 1 \quad 8$$

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 上。

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Number Theory

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

Berdasarkan pola di bawah ini, bilangan berapakah yang seharusnya ada pada “__”?

7, 14, 21, __

12. A large package has 8 eggs. A small package has 4 eggs. How many eggs do 2 large packages and 3 small packages have?

Sebuah paket besar berisi 8 buah telur. Sebuah paket kecil berisi 4 buah telur. Berapa banyak telur yang ada pada 2 paket besar dan 3 paket kecil?

13. Belly has 14 dolls and Diana has 2 dolls. How many doll(s) does Belly have to give Diana to make them to have the same amount of dolls?

Belly mempunyai 14 boneka dan Diana mempunyai 2 boneka. Berapa banyak boneka yang harus Belly berikan kepada Diana agar mereka mempunyai jumlah boneka yang sama?

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

Isilah “__” dengan ‘+’ dan ‘-’ untuk membuat persamaan di bawah ini menjadi benar. (Tuliskan persamaan ini dengan lengkap pada lembar jawaban)

$$12 \quad \underline{\quad} \quad 4 \quad \underline{\quad} \quad 8 \quad \underline{\quad} \quad 3 \quad = \quad 11$$

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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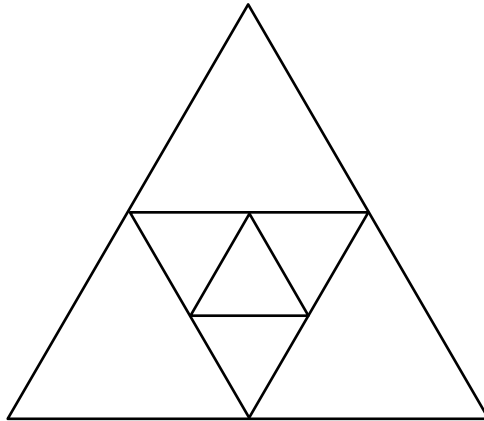
15. Edward and Andy run at the playground. First they run 2 laps together. And then Edward takes rest until Andy runs 4 laps more. Then Edward joins in and they run 2 more laps together. How many laps do they run in total?

Edward dan Andy berlari di sebuah taman bermain. Pertama-tama, mereka berlari 2 putaran bersama-sama. Kemudian Edward beristirahat sampai Andy berlari 4 putaran lagi. Setelah itu, Edward bergabung dan mereka berlari bersama 2 putaran lagi. Berapa putaran mereka berlari secara keseluruhan?

Geometry

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

Berapa banyak segitiga yang ada pada gambar di bawah ini?



Question 16

Soal No. 16

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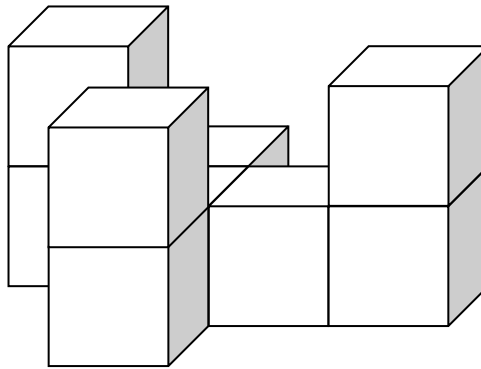
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17. At least how many cube(s) is / are there in the figure below?

Setidaknya ada berapa kubus yang ada pada gambar di bawah ini?



Question 17

Soal No. 17

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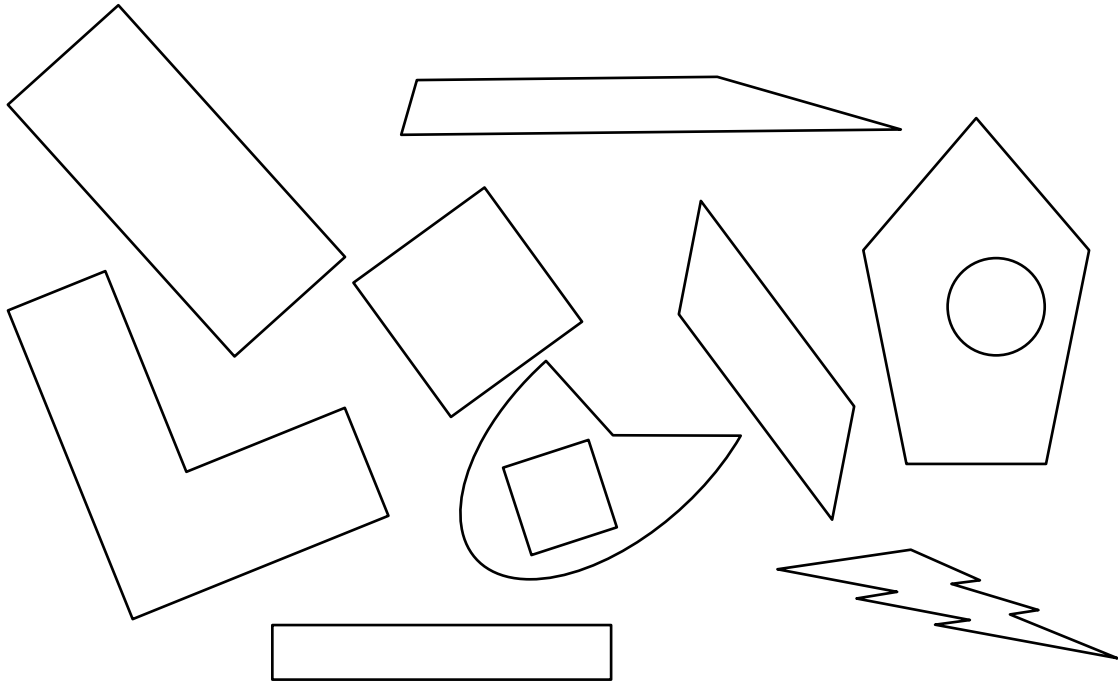
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請將答案寫在 **答題紙** 上。

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18. How many rectangle in the figure below?

Berapa banyak persegi panjang yang ada pada gambar di bawah ini?



Question 18

Soal No. 18

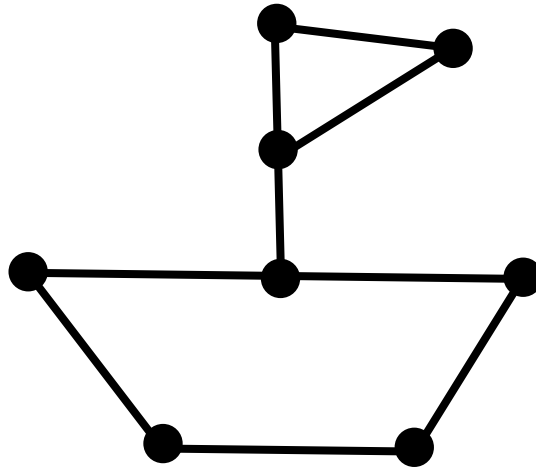
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19. How many line segment(s) is / are there in the figure below?

Berapa banyak ruas garis yang ada pada gambar di bawah ini?

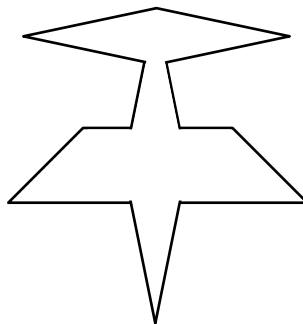


Question 19

Soal No. 19

20. How many side(s) is / are there in the polygon below?

Berapa banyak sisi yang ada pada segibanyak di bawah ini?



Question 20

Soal No. 20

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答題紙

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Combinatorics

21. According to the following answers, what is the difference between the number(s) of odd number(s) and even number(s)?

Berdasarkan jawaban-jawaban di bawah ini, berapakah selisih banyaknya bilangan ganjil dan bilangan genap?

$$8+9, 17-5, 2+8, 11-3, 6-1, 8+1, 3+5$$

22. Edward has 6 \$1 and 3 \$2 coins. At most how many \$5 coin(s) can he exchange?

Edward mempunyai 6 koin \$1 dan 3 koin \$2. Berapa paling banyak koin \$5 yang dapat dia tukarkan?

23. What is the smallest 3-digit number by choosing 3 digits from 8, 6, 0 and 2? (Each digit can only be used once)

Berapakah bilangan 3-angka terkecil yang dapat dibentuk dengan memilih 3 angka dari 8, 6, 0 dan 2? (Setiap angka hanya dapat digunakan satu kali).

24. Separate 12 stars into 4 equal groups, how many star(s) is / are there in each group?

Kelompokkan 12 bintang berikut menjadi 4 kelompok sama besar, berapa banyak bintang yang ada dalam setiap group?



25. Alice has 6 portions of apples, 3 portions of bananas and 5 portions of strawberries. She

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needs to share those fruit with her brother evenly and each of them has at least 1 portion of each fruit. If brother gets 5 portions of apples, how many portions of bananas does Alice get?

Alice mempunyai 6 porsi apel, 3 porsi pisang dan 5 porsi stroberi. Alice perlu berbagi buah-buahan tersebut dengan adiknya sama rata dan masing-masing dari mereka akan mempunyai 1 porsi buah-buahan. Jika adiknya tersebut mendapat 5 porsi apel, berapa porsi pisang yang Alice dapatkan?

~ 全卷完 ~

~ End of Paper ~

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