



THAILAND INTERNATIONAL MATHEMATICAL OLYMPIAD HEAT 2019 (HONG KONG REGION)

Kindergarten Group

Time allowed: 90 minutes

Question Paper

Instructions to Contestants:

1. Each contestant should have ONE Question-Answer Book which CANNOT be taken away.
2. 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.
3. All answers should be written on ANSWER SHEET.
4. NO calculators can be used during the contest.
5. All figures in the paper are not necessarily drawn to scale.
6. This Question-Answer Book will be collected at the end of the contest.

THIS Question-Answer Book CANNOT BE TAKEN AWAY.

DO NOT turn over this Question-Answer Book without approval of the examiner.
Otherwise, contestant may be DISQUALIFIED.

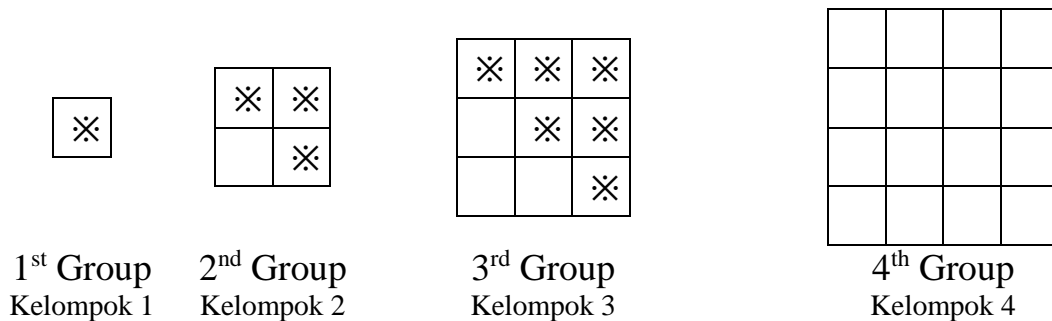
Open-Ended Questions (1st ~25th) (4 points for correct answer, no penalty point for wrong answer)

Logical Thinking

1. Father is 32 years old and mother is 34 years old. What is the difference between their ages?

Ayah berumur 32 tahun dan Ibu berumur 34 tahun. Berapakah selisih umur di antara mereka?

2. According to the pattern shown below, how many ✖ is / are there in the 4th group?
Berdasarkan pola di bawah ini, berapa banyakkah ✖ ada di Kelompok 4?



Question 2
Soal nomor 2

3. According to the pattern shown below, what is the number in the space provided?
Berdasarkan pola di bawah ini, berapakah bilangan yang seharusnya ada pada “___”?

1 、 2 、 2 、 3 、 3 、 3 、 4 、 4 、 4 、 ___ 、

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 “___”?

M 、 O 、 Q 、 S 、 U 、 ___ 、

5. In the figure below, there are 2 balances. Which of ○ 、 △ 、 □ is the lightest?

Pada gambar di bawah ini, terdapat 2 timbangan. Yang manakah di antara ○ 、 △ 、 □ yang paling ringan?



Question 5
Soal nomor 5

Arithmetic

6. 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 adalah benar?

$$7 + \boxed{A} = 12$$

7. Find the value of $21 - 5 - 6$.
Carilah nilai dari $21 - 5 - 6$.
8. Find the value of $2 + 4 + 8 + 6 + 9$.
Carilah nilai dari $2 + 4 + 8 + 6 + 9$.
9. Find the value of $5 + 5 + 5 + 5 + 5$.
Carilah nilai dari $5 + 5 + 5 + 5 + 5$.
10. Refer to the puzzle, find the value of A .
Berdasarkan soal di bawah ini, carilah nilai dari A .

$$\begin{array}{r} A \\ + 1 A \\ \hline 22 \end{array}$$

Number Theory

11. A dog has 4 legs, how many legs do 4 dogs have?
Seekor anjing mempunyai 4 kaki, berapa banyak kaki yang dipunyai 4 anjing?
12. 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 benar (Tuliskan persamaan ini dengan lengkap pada lembar jawaban)

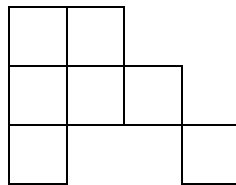
$$10 \quad \underline{\quad} \quad 6 \quad \underline{\quad} \quad 2 \quad \underline{\quad} \quad 4 = 6$$

13. Anna has 16 bananas. Anna eats 4 and exchanges 4 bananas with Bruce for 3 apples. Determine the sum of her bananas is odd or even now.
Anna mempunyai 16 pisang. Anna makan 4 dan menukarkan 4 pisang dengan Bruce yang memberinya 3 apel. Tentukan apakah jumlah pisang yang Anna punya sekarang ganjil atau genap.
14. Kate has 19 potatoes and Amy has 3 potatoes. How many potato(s) does Kate have to give Amy to make them to have the same number of potatoes?
Kate mempunyai 19 kentang dan Amy mempunyai 3 kentang. Berapa banyak kentang yang Kate harus berikan kepada Amy agar mereka mempunyai jumlah kentang yang sama?
15. According to the pattern shown below, determine the number in the space provided is odd or even.
Berdasarkan pola di bawah ini, tentukan apakah bilangan yang seharusnya ada pada “___” ganjil atau genap.

3, 4, 6, 7, 8, 10, 11, 12, 14, ___

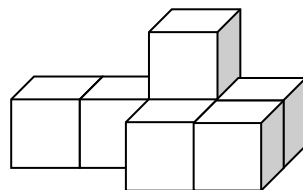
Geometry

16. How many square(s) is / are there in the figure below?
Berapa banyakkah bujursangkar yang ada pada gambar di bawah ini?



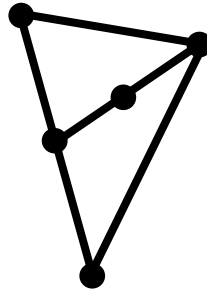
Question 16
Soal nomor 16

17. At least how many cube(s) is / are there in the figure below?
Setidaknya ada berapa kubus yang terdapat pada gambar di bawah ini?



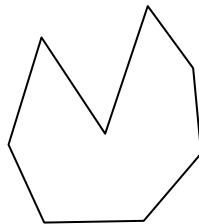
Question 17
Soal nomor 17

18. How many line segment(s) is / are there in the figure below?
Berapa banyak ruas garis yang ada pada gambar di bawah ini?



Question 18
Soal nomor 18

19. How many side(s) is / are there in the polygon below?
Berapa banyak sisi yang ada pada segibanyak di bawah ini?



Question 19
Soal nomor 19

20. According to the pattern shown below, what is the figure in the space provided?
Berdasarkan pola di bawah ini, bentuk apakah yang seharusnya ada pada “ ___ ”?



Question 20
Soal nomor 20

Combinatorics

21. According to the following numbers, how many 2-digit odd number(s) is / are there?
Pada kumpulan bilangan berikut, ada berapa banyak bilangan ganjil 2-angka di sana?

22, 3, 11, 19, 28, 31, 48

22. Amy has 10 \$2 coins. How many \$5 coin(s) can she exchange?
Amy mempunyai 10 koin \$2. Berapa banyak koin \$5 yang bisa Amy dapatkan dengan menukar koin yang dia punyai?
23. Arranging the following numbers in descending order (From the largest to the smallest), find the value of 2nd largest number.
Jika bilangan-bilangan di bawah ini disusun dari yang terbesar ke yang terkecil, carilah nilai dari bilangan terbesar kedua.

15, 21, 67, 35, 19

24. According to the following answers, what is the difference between the number(s) of odd number(s) and even number(s)?
Berdasarkan jawaban dari hasil penjumlahan-penjumlahan di bawah ini, berapa selisih banyaknya bilangan ganjil dan bilangan genap?

$$3 + 5, 2 + 8, 6 + 3, 1 + 7$$

25. What is the largest 3-digit number by choosing 3 digits from 6, 7, 2 and 3? (Each digit can only be used once)
Berapakah bilangan 3-angka terbesar yang terbentuk dengan memilih 3 angka dari 6, 7, 2 dan 3? (Masing-masing angka hanya dapat digunakan satu kali)

~ End of Paper ~