

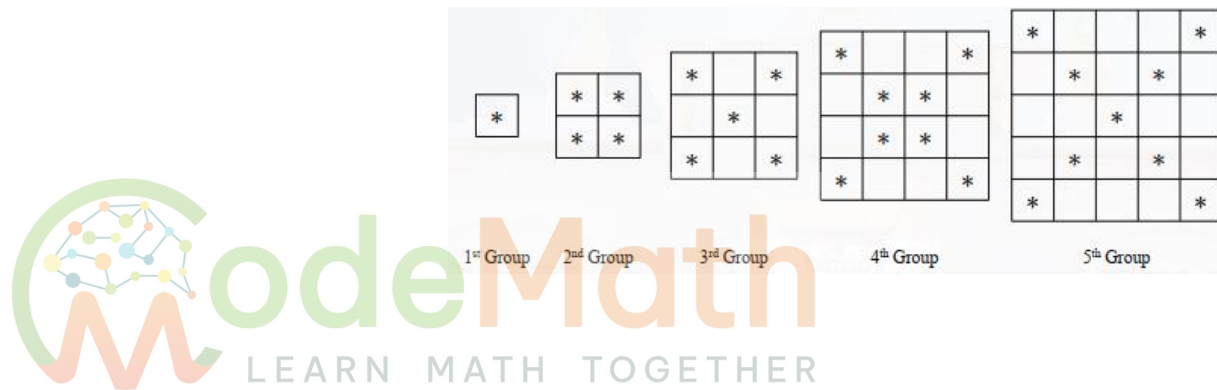
**THAILAND INTERNATIONAL
MATHEMATICAL OLYMPIAD FINAL ROUND
2023 – 2024**

PRIMARY 1

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

Logical Thinking


1. According to the pattern shown below, how many * is / are there in the 7th group?



2. According to the pattern shown below, what should be the English letter filled in the space provided?

G , J , M , P , , ...

3. If 15 days later will be Monday, which day of the week is today?

4. Jennifer is playing “Clapping Game”. She counts backward from 40. When she counts an odd number or any number with digit 8, she claps her hands once. What will the next number be counted right after she has clapped 16 times?
5. 33 students including Peter are standing in a column. There are 12 students standing behind Peter. How many student(s) is / are standing in front of him?
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- CodeMath
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- LEARN MATH TOGETHER

6. Chris is 9 years old now and Andy was 8 years old 5 years ago. What is the sum of their ages this year?

7. Which number should be filled in the box below if the equation below is correct?

$$82 - \square = 6 \times 9$$

8. Find the value of $33 - 49 + 37$.

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

$$A + A + A - 5 = 16$$

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

			7	A
+	3	A	A	
	4	4	2	

11. Find the value of $29 + 18 + 81 + 43 + 72 + 37$.

12. Find the value of $21 - 25 + 29 - 33 + 37 - 41 + 45 - 49 + 53 - 57 + 61$.

Number Theory

13. According to the pattern shown below, what should be the number filled in the blank?

5, 18, 31, 44, 57, 70, _____, ...

14. Melody has 31 coins and Kuromi has 58 coins. If Liam has more coins than Melody has and fewer than Kuromi has, and also the total amount of coins these three people having is an odd number. How many different possible value(s) of the number of coin(s) can Liam have?



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

$$45 \quad _ \quad 13 \quad _ \quad 7 \quad _ \quad 11 = 40$$

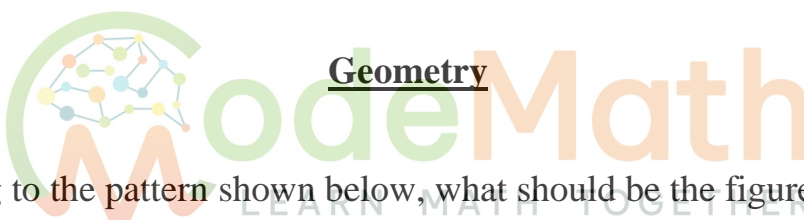
16. Which of the following odd numbers is the largest?

18, 41, 35, 20, 62, 98, 56

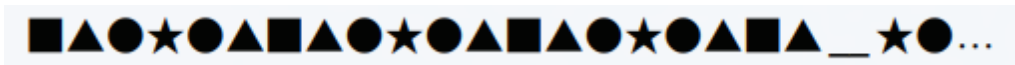
17. For positive integer A , determine whether the result of $A + 2A - 5 + 5A + 13 + 5A - 3A + 4$ is an odd or even number.

18. The numbers below form an arithmetic sequence, what is the 11th term in the sequence?

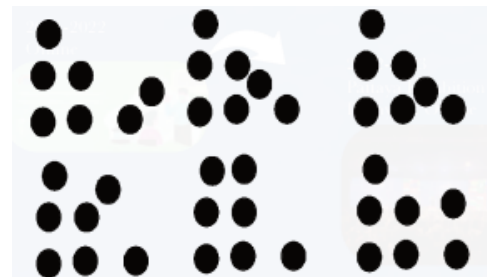
211, 204, 197, 190, 183, __, ...



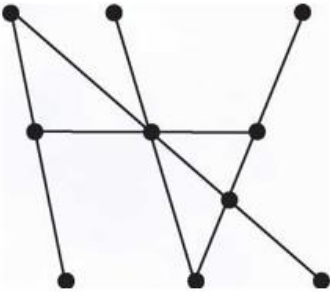
19. According to the pattern shown below, what should be the figure drawn in the blank?



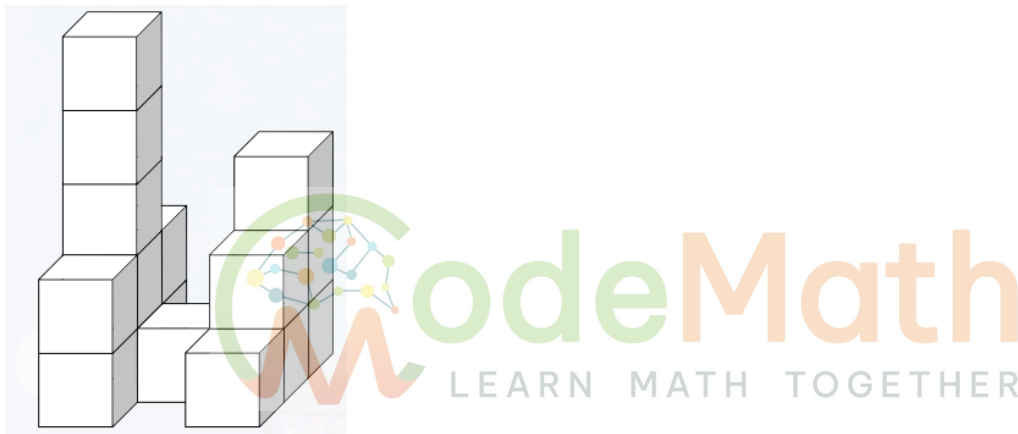
20. How many dot(s) is / are there in the figure below?



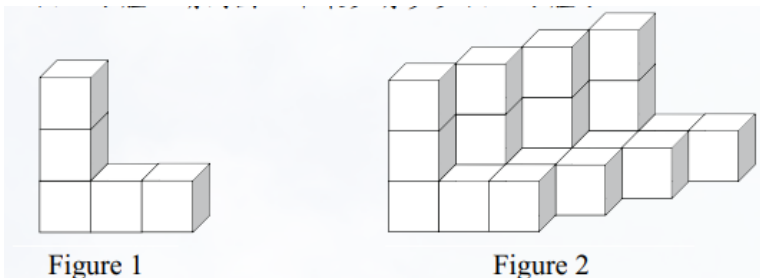
21 How many line segment(s) is / are there in the figure below?



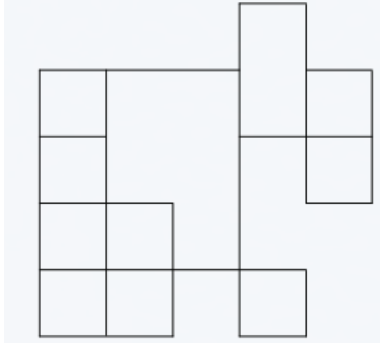
22 Cubes of the same size and shape are stacked together as shown in the figure below. At least how many square face(s) of the cubes can be seen if observing from the top?



23 Cubes of the same size and shape are stacked together as shown in the figures below. Given that there are 5 cubes in figure 1, at least how many cube(s) is / are there in figure 2?



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



Combinatorics

25 According to the pattern shown below, how many odd number(s) is / are there in the first 33rd terms of the number sequence below?

1, 3, 4, 8, 15, 27, 50, 92, 169, ...



26 If we choose 4 different numbers from 0, 2, 4, 7 and 8 to form two 2- digit numbers, what is the smallest possible value of their sum?

27 How many 2-digit number(s) is / are there whose tens digit is smaller than 8?

28 Among the values of the following expressions, how many 1-digit number(s) is / are there?

$$1+9 \text{ 、 } 2+11 \text{ 、 } 17-8 \text{ 、 } 25-19 \text{ 、 } 13+6 \text{ 、 } 41-33 \text{ 、 } 3+6$$

29 Bruce has 3 \$5 coins. At most how many \$2 coin(s) can he exchange these coins for?



30 Which number below is the smallest?

20158765 , 292999 , 1952389 , 20230401