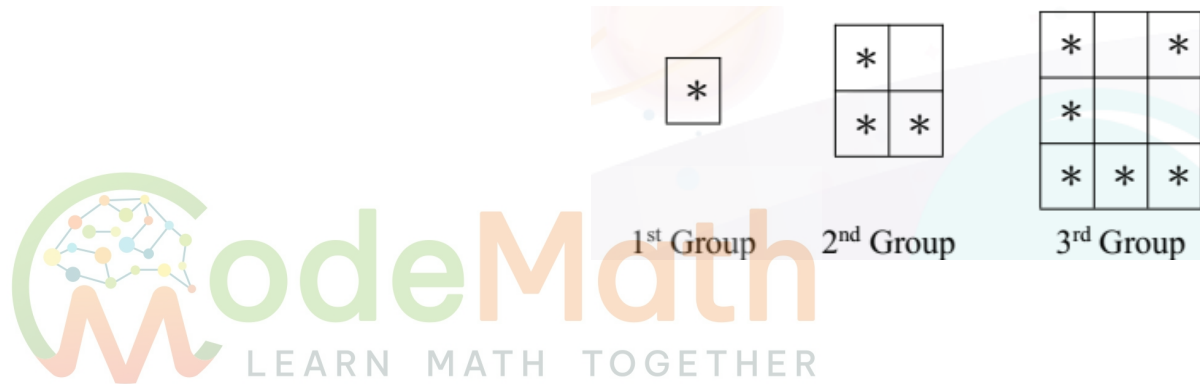


**THAILAND INTERNATIONAL
MATHEMATICAL OLYMPIAD FINAL ROUND
2022 - 2023
Primary 2**

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 10th group?



2. If 15th March 2023 is Wednesday, which day of the week was 29th January 2023?

3. According to the pattern shown below, what should be the English letter Filled in the blank?

R 、 Y 、 O 、 W 、 L 、 U 、 、

4. Chris is 25 years old now and Andy will be 21 years old 3 years later. What is the difference of their ages now?

5. Edward is counting numbers from 2. Whenever the number counting is a multiple of 3 or an odd number, he claps his hands one time. What will the next number counting be after Edward clapped his hand 10 times?

6. Amy and several other children are standing in a column. If there are 25 children standing in front of Amy and 13 children standing behind her, how many child(ren) is / are there in the column?



Arithmetic

7. What should be the number filled in the blank so that the equation below is correct?

$$33 \times \underline{\quad} = 297$$

8. Find the value of $2 - 3 + 5 - 6 + 8 - 9 + \dots + 53 - 54 + 56 - 57 + 59$.

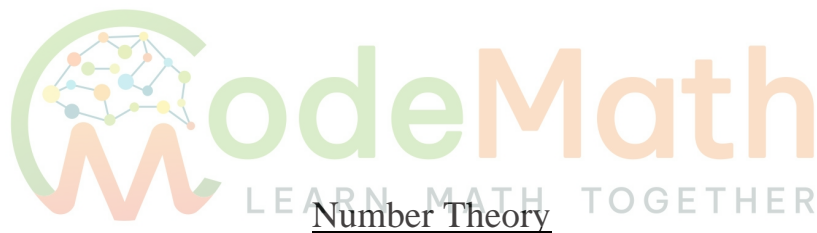
9. Find the value of $25 \div 3 + 31 \div 3 + 19 \div 3 - 5 \div 3 - 16 \div 3$.

10. Find the value of $15 + 32 + 14 + 33 + 48 + 26 + 37$.

11. If A and B are both 1-digit numbers, what is the value of $B - A$ if the equation below is correct?

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

12. Find the value of $3 \times 12 + 18 \times 3 + 39 \times 5$.



13. There are two different packages of chocolate bars in the supermarket. A family package contains 15 chocolate bars and a small package contains 4 chocolate bars. Peggy is buying 2 family packages and 8 small packages of chocolate bars from the supermarket when the chocolate bars are going on sales, of which 3 extra chocolate bars will be given whenever a family package or 4 small packages of chocolate bars are bought at the same time. How many chocolate bar(s) does Peggy get in total?

14. There are 13 students taking mathematics test. Each of the first 5 students has an odd number of scores and each of the next 7 students has an even number of scores. If the total score of all students is an even number, determine whether the score of the last student is an odd or an even.
15. How many 2-digit even number(s) less than 50 is / are multiples of 7 or multiples of 8?

16. The numbers below form an arithmetic sequence, what is the 22nd number in the sequence?

437 , 424 , 411 , 398 , 385 , ...



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

$$3 \quad \underline{\quad} \quad 11 \quad \underline{\quad} \quad 5 \quad \underline{\quad} \quad 15 = 12$$

18. If A is an odd number, determine whether the result of $A \times (A + 9 + 3A + 3 - A)$ is an odd or even number.

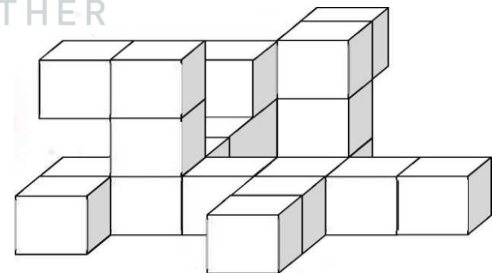
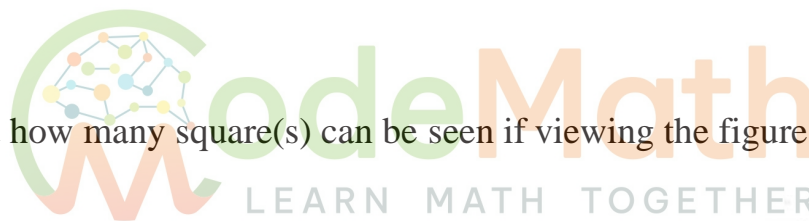
Geometry
&&

19. A pyramid has 48 edges, how many face(s) does this pyramid have?

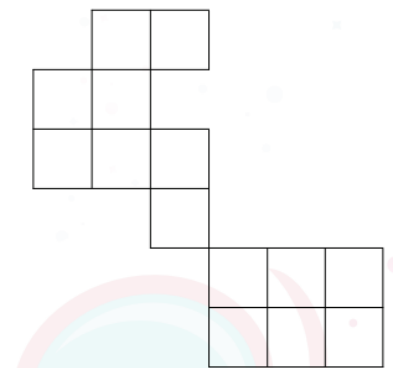
20. According to the pattern shown below, what should be the figure filled in the blank?



21. At least how many square(s) can be seen if viewing the figure below from the right?



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

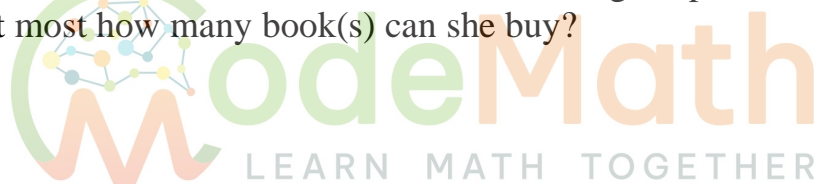


23. At most how many intersection point(s) between 2 squares and 1 triangle in the same plane?

24. Given the lengths of two sides of a triangle are 9 and 11, find the maximum possible length of the remaining side if it is also an integer.

Combinatorics

25. Alice has 7 \$1 coins, 19 \$2 coins and 5 \$5 coins, and she is buying books one at a time. Given each book costs \$7 and no change is provided for each purchase, at most how many book(s) can she buy?



26. How many number(s) containing digit “2” is / are there from 1 to 200 inclusive? (Including number 1 and 200)

27. Niki, Emily and Yuki have some apples. If Yuki gives 11 apples to Emily and Emily gives 8 apples to Niki, they will all have the same numbers of apples. What is the difference between the number of apple(s) between Emily and Niki?

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

$$5 + 6, 2 \times 6, 25 - 4, 8 + 3, 56 + 8, 25 - 17, 2 + 8$$

29. If we are choosing 2 digits, without repetition, from 3, 4, 1, 7 and 6 to form 2-digit numbers, how many of these 2-digit number(s) is / are even numbers?



30. If we are using 8, 2, 3 and 6 without repetition to form two 2-digit numbers, what is the minimum possible value of their difference?