

## THAILAND INTERNATIONAL MATHEMATICAL OLYMPIAD FINAL ROUND 2022 – 2023

#### Primary 1

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

#### **Logical Thinking**

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

According to the pattern shown below, how many \* is / are there in the 6<sup>th</sup> group?



1st Group 2nd Group

3rd Group

\*

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

$$Z \cdot W \cdot T \cdot Q \cdot \_ \cdot \dots$$



4. If 5 days later will be Monday, which day of the week is today?

5. Chris is 16 years old now and Andy was 11 years old 2 years ago. What is the sum of their ages now?

6. 25 students from class 1F, including Peter, are standing in a column. If there are 12 students standing behind Peter, how many student(s) is / are standing in front of Peter?



7. What is the value of 1-digit number *A* if the equation below is correct? A+A+A-A=12

8. Find the value of 29 + 31 + 34 + 38 + 43 - 22 - 24 - 27 - 31 - 36.

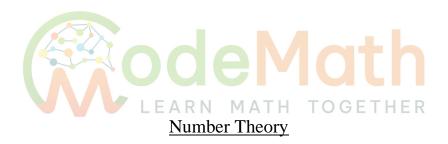
9. Find the value of 33 - 45 + 27.



10. What is the value of 1-digit number *A* if the equation is correct?

11. Find the value of 71 + 38 + 55 + 45 + 62 + 29.

12. Find the value of 40 - 46 + 52 - 58 + 64 - 70 + 76 - 82 + 88 - 94 + 100.



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

14. Find the largest 2-digit odd number less than 70 whose unit digit is smaller than its tens digit.



15. There are two different packages of tea bags in the supermarket. A large package contains 9 tea bags and a small package contains 6 tea bags. Peggy is buying 4 large packages and 6 small package of tea bag from the supermarket when the tea bags are going on sales, of which an extra tea bag will be given whenever a large package and a small package of tea bags are bought at the same time. How many tea bag(s) does Peggy get in total?

16. Which of the following numbers is the greatest odd number?

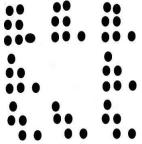


18. The numbers below form an arithmetic sequence, what is the 23<sup>rd</sup> number of this number sequence?



### **Geometry**

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



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

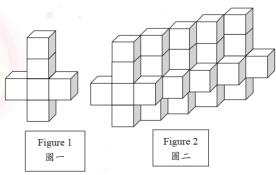




21. How many line segment(s) is / are there in the figure below



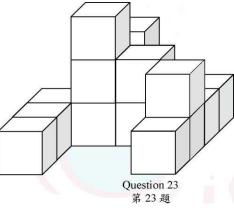
22. Given there are 6 cubes in figure 1, at least how many cube(s) is / are there in íigure 2?



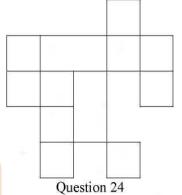


23. At least how many square(s) can be seen if viewing the figure below from the

right?



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



# 25. According to the pattern shown below, how many odd THER

25. According to the pattern shown below, how many odd THER number(s) is / are there in the first 26 terms inclusive of the following sequence?

26. If we are choosing 4 digits, without repetition, from 0, 2, 7, 8 and 9 to form two 2-digit numbers, what is the maximum possible value of their sum?



27. How many 2-digit odd number(s) is / are there with its tens digit less than 7?

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

$$3+11$$
,  $12-3$ ,  $15-11$ ,  $1+9$ ,  $13+2$ ,  $19-5$ ,  $3+5$ 



coins for?

30. Which number below is the smallest?

2023999, 20230121, 20230101, 201965211