

#### HEAT ROUND / VÒNG CHUNG KÉT QUỐC GIA

# Đề số 1: Đề thi Vòng chung kết quốc gia TIMO năm học 2023 – 2024 <u>Logical Thinking/ Tư duy logic</u>

#### Q1. [4.I.8]

Amy takes her examination in four subjects, Chinese, English, Mathematics and Geography. Her average marks of these 4 subjects is 84. If she scores 79 in Chinese 86 in English and 95 in Mathematics, how many marks does she score in Geography?

Geography?
Examination: Bài kiểm tra; Subject: Môn học, Average mark: Điểm trung bình
Score: Đạt được số điểm
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#### Q2. [4.I.4]

The age of mother 4 years ago is the same as the age of father 8 years ago. If the sum of their ages is 80, how old is the father?
Age: Tuổi, Years: Năm; Ago: Trước; The same as: Bằng, Sum: Tổng.
Q3. [4.I.3]
If we divide Chris's age this year by 3, then subtract by 8, then add 5 and finally multiply it by 4, the result will be 80. How old will Chris be two years later?
Divide: Chia; Age: Tuổi, Subtract: Trừ, Add: Cộng; Multiply: Nhân; Result: Kết
quả, Later: Sau này.



#### Q4. [ 4.I.6 ]

Given that 10th April, 2023 is Monday, which day of the week is 20th January
2024?
April: Tháng tư, Monday: Thứ Hai; Day of the week: Thứ trong tuần; January.
Tháng một.
Q5. [4.I.5]
It requires 132 minutes to cut a piece of wood into 12 sections. If the time required
to cut one piece of wood into two sections is the same every time, how many
minutes are required to cut a piece of wood into 7 sections? (You can only cut one
piece of wood into two sections at a time.)
Require: Cần; Minute: Phút; Piece of wood: Khúc gỗ; Section: Phần; The same.
Như nhau.



## Arithmetic/ Số học

#### Q6. [4.II.2]

Find the value of $(70 \times 75 + 20 \times 25 - 50 \times 50) \div 25$ .
Value: Giá trị
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Q7.[4.II.1] OCCHICATION MATH TOGETHER
Using the method of $S = 2 \times S - S$ , find the value of $3 + 6 + 12 + 24 + + 1536$
Method: Phương pháp; Value: Giá trị.



#### Q8. [4.II.3]

Find the value of $56 \div 28 + 392 \div 28 - 224 \div 28$
Value: Giá trị
Q9. [4.II.1] Find the value of 1 + 2 + 3 + + 19 + 20 + 19 + + 3 + 2 + 1.  LEARN MATH TOGETHER  Value: Giá trị



### Q10. [ 4.II.1 ]

Find the value of $8 + 11 + 14 + 17 + + 41 + 44 + 47$
Value: Giá trị
Number Theory/ Lý thuyết số LEARN MATH TOGETHER  Q11. [4.III.2]
Find the unit digit of $3 \times 13 \times 23 \times \times 2013 \times 2023$ .
Unit digit: Chữ số hàng đơn vị.



#### Q12. [ 4.III.4 ]

What is the smallest 4-digit number divisible by 7 and 9?
Smallest: Nhỏ nhất, 4-digit number: Số có 4 chữ số, Divisible by: Chia hết cho.
Q13. [4.III.5]  If a 6-digit number 9843AB is divisible by 45, find the maximum value of A.
6-digit number: Số có 6 chữ số, Divisible by: Chia hết, Maximum value: Giá trị lớn
nhất.



### Q14. [ 4.III.1 ]

Define the operation symbol $a \otimes b = (a + b) \times (a - b)$ , find the value of $(8 \otimes 5) \otimes 9$
Define: Định nghĩa; Operation symbol: Ký hiệu phép toán, Value: Giá trị
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Q15. [4.III.3] OCCIPATION MATH TOGETHER
The sum of 8 consecutive even numbers is 280. Find the 2 <sup>nd</sup> greatest number.
Sum: Tổng; Consecutive even numbers: Số chẵn liên tiếp; $2^{nd}$ greatest number: Số
lớn thứ 2.



#### Geometry/Hình học

## Q16. [ 4.IV.1 ]

How many rectangles are there in the figure be	elow?				
Rectangle: Hình chữ nhật, Figure: Hình vẽ.					
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Q17. [4.IV.3] We combine 16 squares of perimeter 32 to	тн то	GETI	HER	<b>TT</b> 71	
We combine 16 squares of perimeter 32 to	form a	new re	ectangle	. What	is the
difference between the largest value and the sarectangle?	mallest va	alue of	the perin	neter of	the
Combine: Ghép; Square: Hình vuông; Peri	meter: C	hu vi;	Rectang	gle: Hìn	h chữ
nhật, Difference: Hiệu; Largest: Lớn nhất; Va	lue: Giá	trį; Smo	allest: N	hỏ nhất.	
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#### Q18. [ 4.IV.4 ]

The	lengths	of sic	des of	a r	ectangle	are	integers.	If the	perimeter	of t	the	rectang	le is
74, 1	find the	larges	t poss	ible	e value c	f the	e area of t	the rect	tangle.				

Lengths: Độ dài; Sides: Cạnh; Rectangle: Hình chữ nhật, Integers: Số nguyên;
Perimeter: Chu vi; Largest possible value: Giá trị lớn nhất có thể, Area: Diện tích.
Q19. [4.IV.7]  LEARN MATH TOGETHER  Given the lengths of legs of a right-angled triangle are 9 and 12, find the length of
the hypotenuse of this right-angled triangle.
Lengths: Độ dài; Legs: Cạnh góc vuông; Right-angled triangle: Tam giác vuông
Hypotenuse: Cạnh huyền.



### Q20. [ 4.IV.7 ]

A line segment is formed by joining 2 points. Given that there are 99 points, at most
now many line segments can be formed by joining these points?
Line segment: Đoạn thẳng, Formed: Được tạo ra, Joining: Nối, Points: Điểm, At
most: Nhiều nhất.
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Combinatories/ Tổ hơn
Combinatorics/ Tổ hợp LEARN MATH TOGETHER
Q21. [ 4.V.5 ]
A flight of stairs has 7 steps. Tommy can go up 1 step, 2 steps or 3 steps at a time.
How many different ways are there for Tommy to go up the stairs?
Flight of stairs: Cầu thang, Steps: Bậc, At a time: 1 lần; Different ways: Cách khác
nhau.



### Q22. [4.V.1]

How many 2-digit numbers are there which contain digit "6"?	2
2-digit numbers: Số có 2 chữ số, Contain: Chứa; Digit: Chữ	số.
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Q23. [4.V.3]	
In how many different ways can Parker walk from point A to	point B following the
paths in the figure below given that he can only move left or LEARN MAIH, TOGET	
LEARN MATH, TOGET Different ways: Các cách khác nhau; Point: Điểm; Path: E	HER Juràno đi Figure: Hình
vẽ, Move left: Đi sang trái; Move down: Đi xuống dưới	
ve, move test. Di sang trai, move down. Di xuong auoi	
В	



### Q24. [4.V.4]

Numbers are drawn among 57 integers from 23 to 79 at random without repetition.
At least how many numbers should be drawn to ensure that there are two numbers
whose sum is 80?

Drawn: Được chọn ra; Integers: Số nguyên; At random: Ngẫu nhiên; Without
repetition: Không lặp lại; At least: Ít nhất, Ensure: Chắc chắn; Sum: Tổng.
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Q25. [ 4.V.7 ]
Given that the total weight of 10 boxes of apples and 2 boxes of pineapples is 750
kg, and the total weight of 3 boxes of apples and 2 boxes of pineapples is 330 kg.
What is the difference between the weights of a box of pineapples and a box of
apples?
Total weight: Tổng cân nặng; Boxes: Hộp; Difference: Hiệu.

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