Logical Thinking / Tư duy logic

1. According to the pattern shown below, what is the number in the space provided?

Pattern: Quy luật; Space: Chỗ trống.

$$20 , 23 , 27 , 32 , 38 , 45 , 53 , \_\_ ,$$

Key: 62

2. According to the pattern below, what is the English letter in the space provided?

Pattern: Quy luật; English letter: Chữ cái tiếng Anh; Space: Chỗ trống.

$$F , S , I , Q , L , O , O , M , \_\_ ,$$

Key: R

3. Mary needs 20 minutes to draw 1 picture and then rests for 5 minutes. How many minutes does Mary need to draw 4 pictures?

Minute: Phút; Draw: Vẽ; Picture: Bức tranh; Rest: Nghỉ.
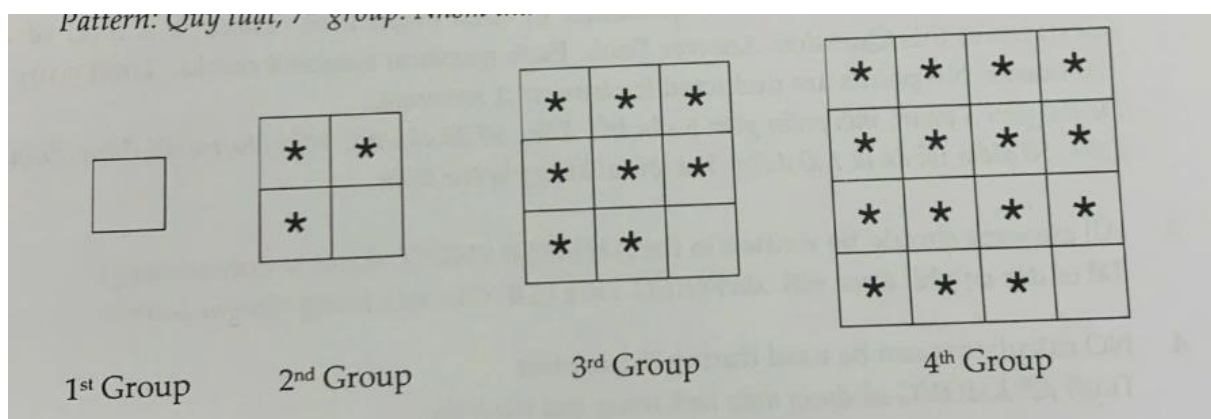
Key: 95

4. If 11th August is Monday, which day of the week is 15th October of the same year?

August: Tháng 8; Monday: Thứ Hai; Day of the week: Thứ trong tuần; October: Tháng 10; The same year: Cùng năm.

Key: Wednesday

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

Pattern: Quy luật; 7th group: Nhóm thứ 7.

1st Group   2nd Group   3rd Group   4th Group

Key: 48

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6. Find the value of $1 + 4 - 7 + 10 - 13 + 16 - 19 + 22 - 25 + 28$.
Value: Giá trị.

Key: 17

7. Find the value of $26 + 48 + 52 + 83 + 84 + 37$
Value: Giá trị.

Key: 330

8. Find the value of $14 \times 15 + 14 \times 8 - 10 \times 14 + 17 \times 14$
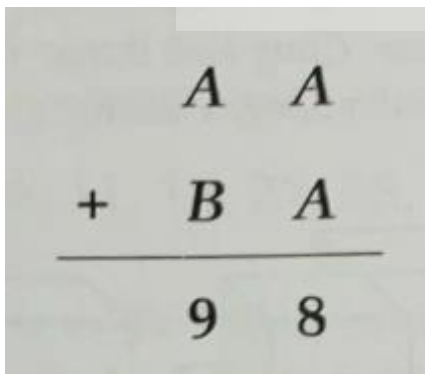*Value: Giá trị.*

Key: 420

9. Find the value of $22 - 7 - 6 + 11 - 9 - 3$
Value: Giá trị.

Key: 8

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

Different: Khác nhau; 1-digit number: Số có 1 chữ số; Value: Giá trị; Equation: Phép tính; Correct: Đúng.

Key: 5

Number Theory / Số học

11. What is the largest 3-digit odd number smaller than 500 with different digits?
Largest: Lớn nhất; 3-digit odd number: Số lẻ có 3 chữ số; Smaller than: Nhỏ hơn; Different: Khác nhau; Digit: Chữ số.

Key: 497

12. In a singing competition, 30 children have an even number of scores in total. For the first 15 children, each child has an odd number of scores. For the following 6 children, each child has an even number of scores. Determine whether the total scores of the remaining children is odd or even.

Child / Children: Đứa trẻ; Score: Điểm số; Total: Tổng; Each: Mỗi; First: Đầu tiên; Following: Tiếp theo; Remaining: Còn lại; Determine: Xác định; Even: Chẵn; Odd: Lẻ.

Key: Odd

13. Each box of eggs has 12 eggs. Mom asks Mary to buy 35 eggs. Her neighbor asks her to buy 29 eggs. At least how many boxes of eggs does Mary need to buy?

Each: Mỗi; Box: Hộp; Egg: Quả trứng; At least: Ít nhất.

Key: 6

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

Fill: Điền; Blanks: Chỗ trống; Equation: Phép tính; Correct: Đúng. (Viết lại toàn bộ phép tính vào phiếu trả lời).

$$9 \_\_\_ 10 \_\_\_ 8 \_\_\_ 5 = 6$$

Key: 9 + 10 - 8 - 5

15. The numbers below form an arithmetic sequence. What is the 11th number?
Arithmetic sequence: Dãy số cách đều; 11th number: Số thứ 11.

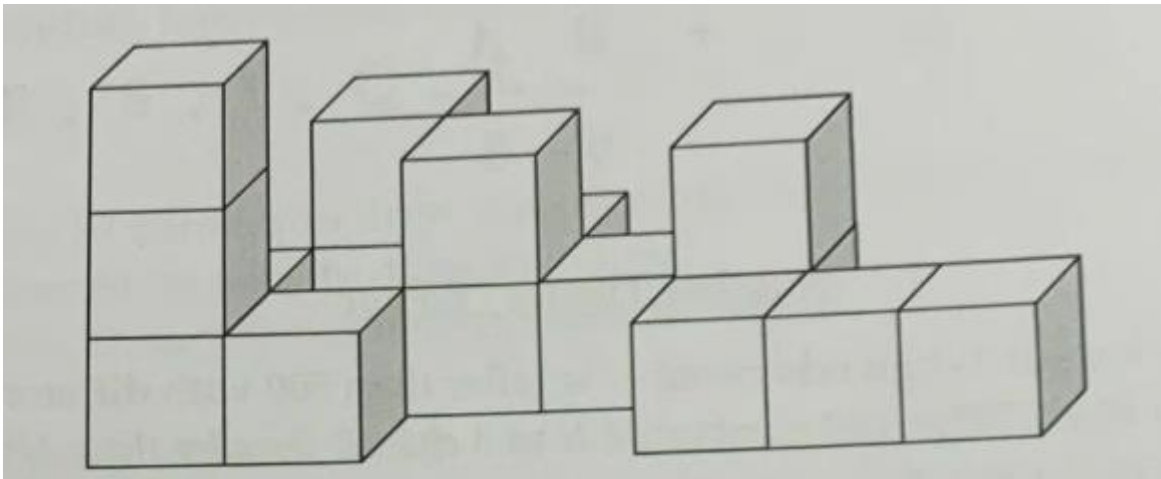**200 , 189 , 178 , 167 , 156 , …**

Key: 90

Geometry / Hình học

16. A pyramid has 12 vertices. How many edges does this pyramid have?

Pyramid: HÌnh chóp, vertices: Đỉnh, Edges: Cạnh

Key: 22

17. Cubes of the same size are placed as shown in the figure below. At least how many square faces can be seen if viewing the figure below from the top?

Cube: hình lập phương, same size: Cùng kích thước; Placed: Được xếp, Figure: Hình vẽ, At least: Ít nhất, Square face: Mặt hình vuông, viewing: Quan sát, from the top: Từ bên trên
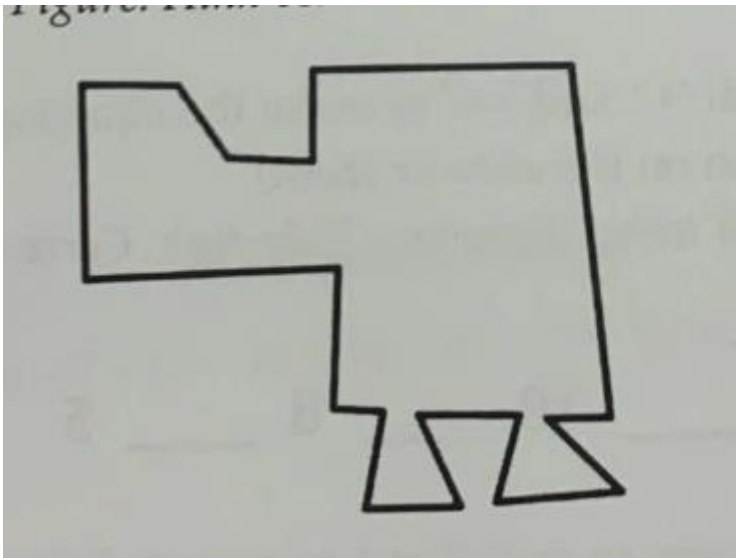
Key: 11

18. How many line segments are there in the figure below?

Key: 19

19. How many interior angles are there in the figure below?

Key: 18

20. According to the pattern shown below, what is the figure in the space provided?

Key: hình vuông

Combinatorics/ Tổ hợp

21. Neo has 6 $1 coins, 3 $2 coins and 6 $5 coins. At most how many $10 notes can he exchange?

Key: 4

22. How many odd numbers are there from the 5th term to the 18th term in the sequence given below?

3 , 6 , 11 , 18 , 27 , 38 , …

Key: 7

23. There are 3 ways from the zoo to the train station. There are 2 ways from the train station to the cinema. There are 3 ways from the cinema to the playground. How many different ways are there to go from the zoo to the playground passing through the train station and the cinema?

Key: 18

24. After Mary gives 9 chocolates to Andy and Mary takes 12 chocolates from Eric, they will have an equal number of chocolates. How many chocolates does Eric have more than Andy originally?

Key: 21

25. Choose 3 different digits from 0, 3, 4 and 9 to form a 3-digit numbers. What is the difference between the largest number and the smallest number that can be formed?

Choose: Chọn; Different: Khác nhau; Digit: Chữ số; Form: Tạo thành; 3-digit number: Số có 3 chữ số; Difference: Hiệu; Largest: Lớn nhất; Smallest: Nhỏ nhất.

Key: 639