

## 2024 SASMO G3

### Question 1

What is the value of the following sum?

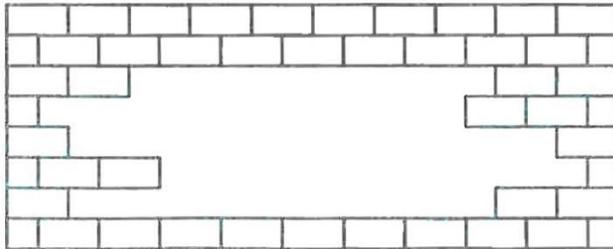
$$94+81+73+60+52+46+39+27+18$$

- A. 500
- B. 490
- C. 480
- D. 470
- E. None of the above

Ans: B

### Question 2

How many bricks are needed to fix the wall below?



- A. 34
- B. 35
- C. 36
- D. 37
- E. None of the above

Ans: B

### Question 3

What is the next number in the sequence below?

1,2,5,14,41,122, ...

- A. 365
- B. 366
- C. 245
- D. 200
- E. None of the above

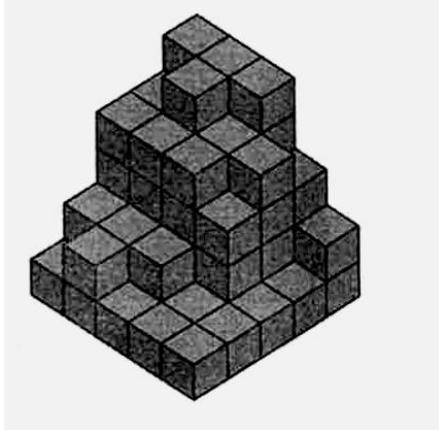
Ans: A

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## Question 4

The diagram shows some cubes of the Same size stacked at a corner of a room. How many cubes are there altogether?

( Note: The floor is horizontal and the two walls are vertical. There are no gaps or holes behind the visible cubes.)



- A. 66
- B. 67
- C. 68
- D. 69
- E. None of the above

Ans: C

## Question 5

Which of the given numbers of pencils can be evenly arranged into groups of 6 without any remaining?

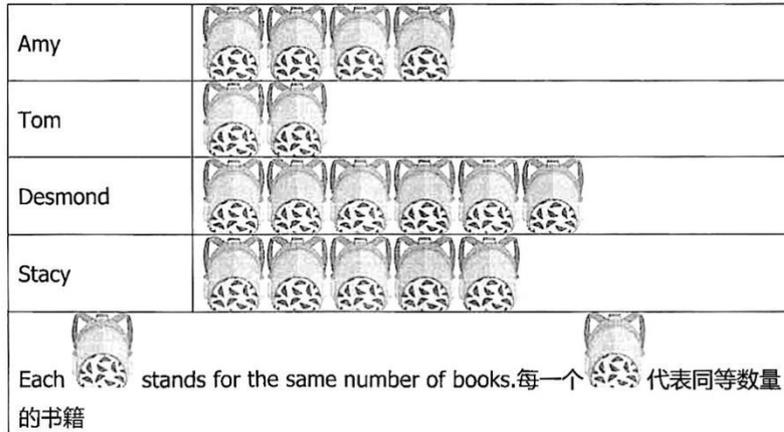
- A. 94
- B. 166
- C. 712
- D. 1956
- E. None of the above

Ans: D

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**Question 6**

The picture graph below shows the number of books that Amy, Tom, Desmond and Stacy have. Altogether, they have 153 books. If Tom wants to have as many books as Desmond, how many books does he need to buy?



- A. 4
- B. 9
- C. 32
- D. 36
- E. None of the above

Ans: D

**Question 7**

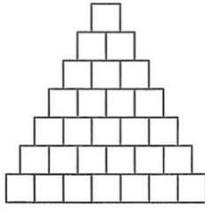
A shop has a special offer: for every 8 empty cola cans returned, customers can exchange them for one can of cola. Alex has just enough money to buy 92 cans of cola. What is the greatest number of cola cans that Alex can obtain?

- A. 101
- B. 102
- C. 103
- D. 104
- E. None of the above

Ans: E

## Question 8

The figure below is formed by identical squares with a length of 4 cm. What is the perimeter (in cm) of the figure?



- A. 112 cm
- B. 108 cm
- C. 84 cm
- D. 28 cm
- E. None of the above

Ans: A

## Question 9

A farmer has a total of 175 eggs in two nests. After moving 20 eggs from the first nest to the second one, the first nest has 15 more eggs than the second one. How many eggs were initially in the second nest?

- A. 115
- B. 95
- C. 80
- D. 60
- E. None of the above

Ans: D

## Question 10

In a chess tournament, there are 7 players. Each player competes once against every other player in the tournament. What is the total number of games played in the tournament?

- A. 56
- B. 42
- C. 28
- D. 21
- E. None of the above

Ans: D

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## Question 11

The 6-digit number 75276A is a multiple of 11. The 6-digit number A6712B is a multiple of 9. Find the value of A+B.

- A. 11
- B. 10
- C. 8
- D. 3
- E. None of the above

Ans: A

## Question 12

In a treasure hunt, there are 9 hidden chests and 9 distinct maps. Each map guides to a specific chest, and no two maps lead to the same chest. What is the greatest number of attempts Sam needs to make to discover which map corresponds to each Chest?

- A. 28
- B. 45
- C. 72
- D. 90
- E. None of the above

Ans: E

## Question 13

Study the pattern below. What is the value of the missing number?



- A. 125
- B. 512
- C. 58
- D. 95
- E. None of the above

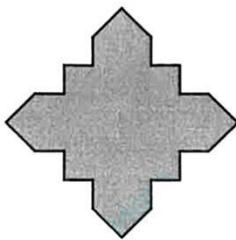
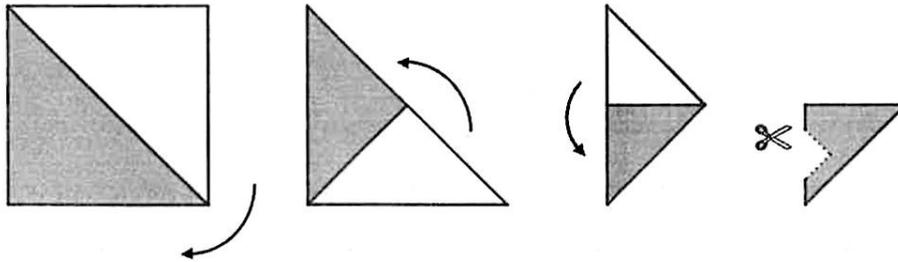
Ans: A

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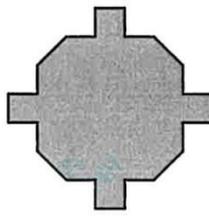
Question 14

Fold a piece of paper three times and then cut along the dashed line. What image

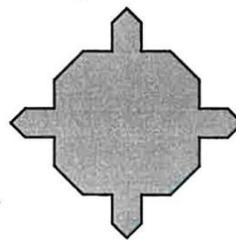
will be revealed when the paper is unfolded?



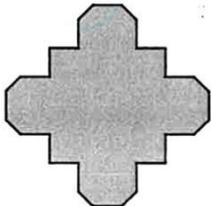
A.



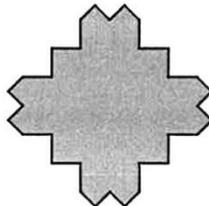
B.



C.



D.



E.

Ans: C

Question 15

Alex, Mia, Owen and Lily are comparing the number of books they read.

Owen: I read more books than Alex, but someone read more than me.

Lily: I read the most number of books.

Mia: I did not read the most number of books.

Alex: I read the fewest number of books.

All 4 of them read different numbers of books. If one of them is lying, can you rank the number of books they read from the fewest to the most?

- A. Mia, Owen, Alex, Lily
- B. Alex, Owen, Mia, Lily
- C. Mia, Alex, Owen, Lily
- D. Lily, Owen, Alex, Mia
- E. None of the above

Ans: C

## Question 16

The sum of the digits of an odd 3-digit number is 10. What is the largest possible such 3-digit number?

Ans: 901

## Question 17

It is given that

$$\text{Koala} \times \text{Koala} + \text{Wombat} = 58$$

$$\text{Owl} + \text{Wombat} = 17$$

$$\text{Wombat} + \text{Koala} + \text{Owl} = 24$$

Find the value of  of

Ans: 8

## Question 18

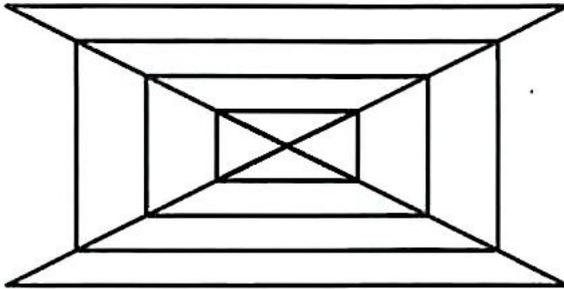
Samantha and Sarah initially had an equal number of notebooks. Samantha gifted 11 notebooks to Sarah. Afterwards, Sarah purchased 14 more notebooks. The final number of notebooks Sarah had was three times the number Samantha had originally. How many notebooks did each of them have at the beginning?

Ans: 29

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Question 19

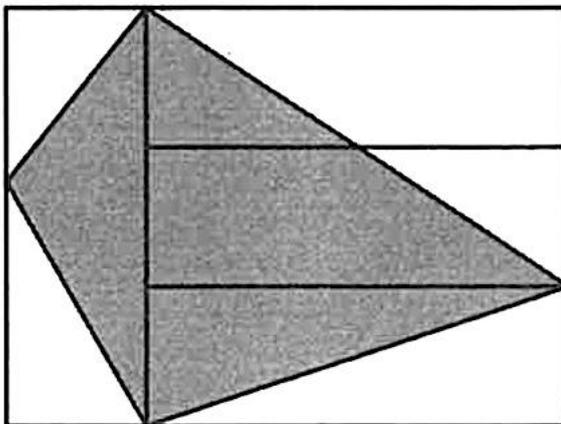
How many triangles are there in the figure below?



Ans: 26

Question 20

The large rectangle below is made up of 4 identical rectangles. Given that the perimeter of the small rectangle is 64 cm, what is the area (in cm) of the shaded region?



Ans: 384

**Question 21**

I am a 3-digi even number.

- All my digits are different.
- The digits in my number are arranged in increasing order from left to right.
- The digits in my hundreds and tens places add up to 13.

What number am I?

Ans: 678

**Question 22**

Tom creates four-digit multiples of 4 using each of the digits 1, 3, 6 and 8 exactly once. How many such 4-digit numbers can Tom create?

Ans: 6

**Question 23**

How many different 3-digit odd numbers can be formed using an odd number of matchsticks in total?

Ans: 225

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Question 24

In the following, all the different letters stand for different digits. If B is a multiple of 4, what is the value of the 4-digit number DAFE?

$$\begin{array}{r}
 \phantom{+} \phantom{+} \phantom{+} A \phantom{+} B \phantom{+} D \\
 + \phantom{+} \phantom{+} \phantom{+} A \phantom{+} B \phantom{+} A \\
 \hline
 D \phantom{+} A \phantom{+} F \phantom{+} E \\
 \hline
 \end{array}$$

Ans: 1970

Question 25

Study the pattern below. What is the value of the missing number?

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Ans: 34