1. A honeycomb with side of length 2 has 7 cells:
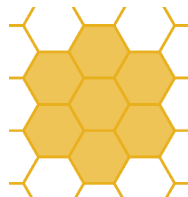
A honeycomb with side of length 3 has 19 cells:
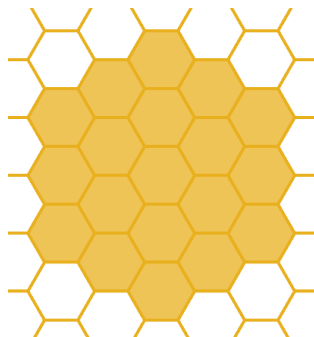
How many cells are there in a honeycomb with side of length 100?

2. In the following addition, different shapes denote different digits, and identical shapes denote identical digits:
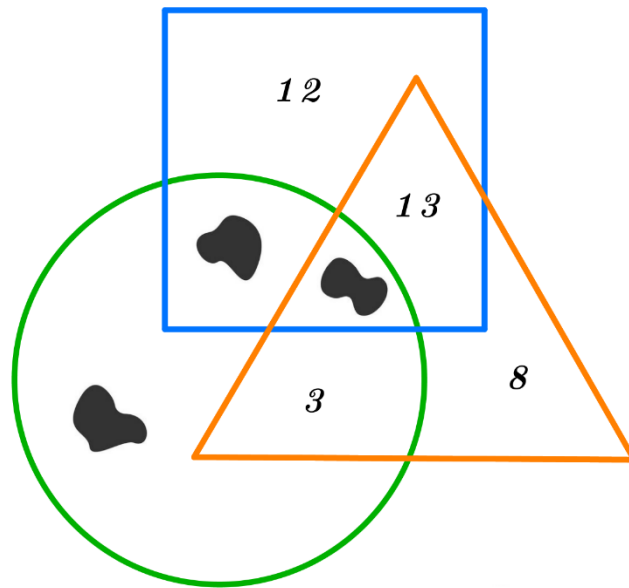

What is the number 🌸 + 🍀 + 🌻 + 🌵 ?

3. In the picture is a map of a magical land. Everyone who lives inside the circle likes the color green. Everyone who lives inside the square, likes the color blue. Everyone who lives in the triangle, likes the color orange. Some might like more than one color.

On some of the areas it is written how many people reside there. *For example, 3 people like orange and green and do not like blue.*
The captions on some areas have been omitted.

The number of all the residents who like blue is 10 more than the number of all the residents who like orange. Also, the number of all the residents who like orange is 5 more than the number of all the residents who like green.

How many residents of the magical land love the color green and no other color?

4. The year 2023 marks the 7th time this Olympiad takes place. Galit noticed, that the current year is divisible by the number of the current Olympiad (2023 is divisible by 7). How many time will such event happen in the future, if the Olympiad would continue to take place once every year, forever?
Note: this year's occurrence isn't counted as future occurences.

5. In the following picture there are four nets (edge unfoldings) of the same decorated cube, and one – of a differently decorated cube. Which of the nets correspond to the different cube?
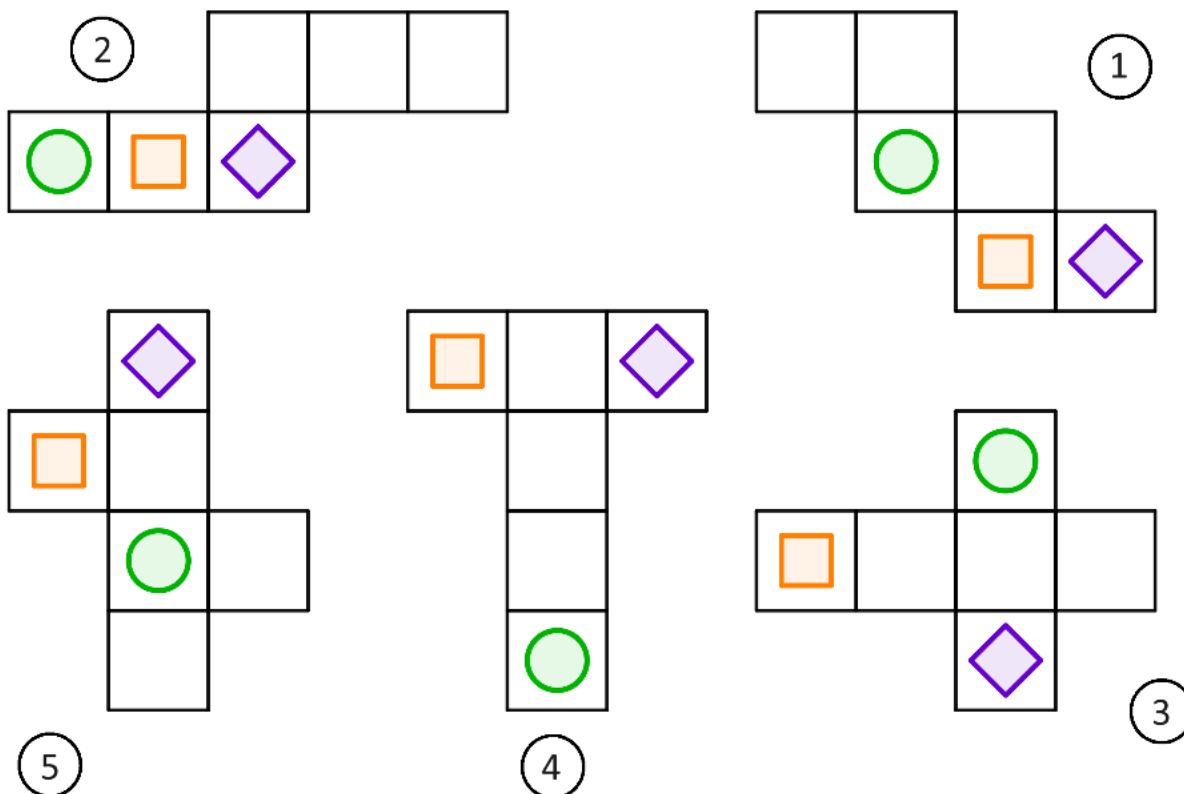
6. A community center has a soccer club, a basketball club and a volleyball club. A total of 72 children train in these clubs. Each child trains in exactly one club. After a month of training, the following three things happened simultaneously:

> Exactly a third of all the children who practiced soccer this month switched to volleyball;
> A fifth of all the children who trained in basketball this month switched to soccer;
> And a tenth of all the children who practiced volleyball this month, switched to basketball.

As a result, the size of each club remained the same as before.
How many of the 72 children continued to practice in the clubs in which they started?

בהצלחה!