

C++ (ENGLISH)

5. forduló



A kategória támogatója: Google

Ismertető a feladatlaphoz

Kezdj neki minél hamarabb, mert a feladatot a forduló záró időpontjáig lehet beküldeni, nem addig lehet elkezdni!

Sok sikert!



This round consists of algorithmic problems. Before the timer starts, please prepare your favorite C++ IDE (C++ version 17 or above is recommended). The input will be provided in a downloadable text file (less than 100KB), and you will also find a solution code template.

You are allowed to use any content that you own or find on the internet that was published before the start of the round. However, any other form of assistance is prohibited.

Indítás utáni csatolmányok

1. feladat 10 pont

Combination

For n and k positive integers, $n \geq k$, a combination of n and k is $C(n,k)$ which is calculated using the following formula: $n!/((n-k)!*k!)$. Calculate $C(n,k)$ for values stored in a file. The file's first line contains the number of calculations to be completed (N), then it contains N lines with 2 numbers (n and k) separated by a space. Example:

```
3
90 5
45 6
6 2
```

Your program needs to output the sum of digits of the results. In this case the results are 43949268, 8145060, 15, the sum of their digits is 75.

combine1.txt: $N=100$, $n \leq 16$

combine2.txt: $N=1000$, $n \leq 30$

combine3.txt: $N=10000$, $n \leq 100$, $k \leq 15$ or $n \leq 60$

Note: prepare to handle huge numbers precisely!

Input handling

The provided input files do not have formatting errors or any data violating the said constraints. Simply reading from ***std::cin*** (or ***std::ifstream***) to N , then N times to n and k should be sufficient input handling.

What is the output for combine1.txt?

Input files are available for download above.

Válasz

2. feladat 10 pont

What is the output for combine2.txt?

Válasz

3. feladat 10 pont

What is the output for combine3.txt?

Válasz

Megoldások beküldése