

J3 // CCC Upgrades

Anish is upgrading his computer with the reasoning that an upgraded computer will drastically improve his CCC score. He is currently looking at three very important factors:

1. Keyboard (RGB or not) - **K**
2. Graphics Card (RTX2070 and above) - **G**
3. Cost (Money Matters) - **C**

He looks at all three factors and decides that the following formula accurately represents the value of a computer

$$2K + G - C$$

If Anish gets a computer, his sister also must get one because Anish's parents are fair. His parents want to also get computers that are the most closely matched in price. They will only ever take positive integer-value computers because of intelligence reasons.

Input Format

The first line of input will be an integer n ($0 \leq n \leq 10000$). Each of the remaining n lines of input will contain a computer specification. A computer specification is of the form:

- The Computer Name (a string of less than 20 characters)
- The Keyboard Value of the Computer (an integer **K** with $1 \leq K \leq 128$)
- The Graphics Card Value (an integer **G** with $1 \leq G \leq 4000$)
- The Cost (an integer **C** with $1 \leq C \leq 3000$)

There is one space between the computer name, **K**, **G**, and **C** on each line.

Output Format

Find the two most closely valued computers and output them on two separate lines with the higher valued item first. If there is a tie in the rankings, pick the computer(s) whose name(s) are lexicographically smaller (i.e., Apple is smaller than Dell). There will be no two deals with the exact same difference in value.

If no positive value deal exists for two computers, output **-1**.

Sample Input

```
4
ABC 13 22 1
DEF 10 20 30
GHI 11 2 2
JKL 20 20 20
```

Sample Output

```
ABC
JKL
```