
6. Semester Average

Program Name: Semester.java

Input File: semester.dat

Ms. Appleworth is a teacher and needs you to write a program to compute the minimum grade that a student must make on the final exam to make a specific grade in her class. To compute the semester average, the average of the three six-weeks grades will count 80% and the final exam will count 20%.

Input

The first line of input will contain a single integer n that indicates the number of students in her class. Each of the following n lines will contain a student's six-digit ID number, three six-weeks' grades and the semester average the student wishes to have. Each of items will be separated by a space.

Output

In ID number order, you will print the student's ID number, a space, and the minimum grade the student can make to achieve the desired average. To keep the student from having false expectations, the minimum grade should be rounded up to the nearest integer. For example, 87.2 would become 88.

Note: Do not round any computation except the final minimum grade, which will be the smallest integer that is greater than or equal to the grade needed to obtain the desired grade.

Example Input File

```
4
123456 90 90 90 90
543216 70 80 80 70
345326 65 65 65 70
435366 80 80 80 90
```

Example Output to Screen

```
123456 90
345326 90
435366 130
543216 44
```