2434   Money Lesson

Mrs Brown is teaching her pupils about money. At the moment, they are using dummy $5, $10 and $20 notes. Before a lesson starts, Mrs Brown arranges piles of different notes for the pupils so that each one has the same amount of money. The total number of notes in each pile does not exceed 100 notes. Then she takes one, and only one, note from one pupil's pile and puts it in the pile of another pupil. The pupils then have to work out which one has the most money, and which one has the least. Sometimes, Mrs Brown does not move a note so that each pupil has exactly the same amount of money — the pupils have to be able to tell when this happens. Your task is to write a program to calculate the correct answer that Mrs Brown's pupils ought to report.

Input

The input consists of a series of scenarios for a number of lessons. The first line in each scenario consists of a positive integer, N, which represents the number of pupils in the class that day ($2 < N < 30000$). Each of the following N lines contains the data for one pupil. The lines contain four items, the name of the pupil (a single series of between 2 and 10 letters, lower case except for the first) followed by the number of $5, $10 and $20 notes (in that order) allocated to that pupil. Items are separated by single spaces. Input is terminated by a scenario where N equals '-1'. This scenario should not be processed.

Output

Output consists of one line for each scenario. It will be in one of the following two formats:

X has most, Y has least money.
All have the same amount.

X and Y are student names.

Sample Input

```
5
Andrew 0 0 2
Brenda 0 4 0
Chen 8 1 0
David 2 0 1
Eloise 0 2 1
3
Xerxes 0 3 0
Yolanda 0 1 1
Zebedee 4 1 0
-1
```

Sample Output

```
Chen has most, David has least money.
All have the same amount.
```