

2190 Being Late

Professor AlwaysLate is notorious for having something to say past the end of class time, and even past the start time of following classes. This habit is not viewed kindly by the students' rights movement, which motivated them to collect data about such conduct. The students' rights movement wants to process their extensive data collection and extract some useful information for their annual report, and you are asked to help. Your task is to write a program to read a number of lines, where each line contains a record about a single class, and calculate the average length of time spent past the end of class for Professor AlwaysLate.

Input

The input consists of a series of scenarios. In each scenario, the input starts with a positive integer N that represents the number of records, with $30000 \leq N > 0$, on a separate line followed by a description of the N records. Each record is described on a separate line by: Four (4) integers $oHour$, $oMinute$, $aHour$ and $aMinute$. The integers are separated by single spaces. $oHour$ and $oMinute$ represent the official finish time of a class, while $aHour$ and $aMinute$ represent the actual time Professor AlwaysLate left the classroom, where $0 < aMinute, oMinute < 60$, $8 < oHour < 20$ and $oHour < aHour < oHour + 1$.

Output

For each scenario, the output of your program is a single integer that represents the average number of minutes that Professor AlwaysLate spends lecturing past the end of his official class finish time rounded down (that is, truncated) to the nearest minute.

It is worth mentioning that the students's rights movement considers early finishing of a class as a class finished on time, as demonstrated in the second example below.

Sample Input

```
4
10 50 10 55
12 50 13 0
17 50 17 50
13 45 14 0
4
10 50 10 55
12 50 13 0
17 50 17 40
13 45 14 0
```

Sample Output

```
7
7
```