Ordering Paper

Filename: paper

Because the AP teachers are old school, they still insist on administering all of their exams on paper. Exam booklets consist of 17" x 11" in sheets of paper folded vertically down the middle. A booklet made of a single sheet can have writing on up to four pages, since each sheet folds into two parts and each part has two sides. The state would like to know how many sheets of the 17" x 11" paper to order based on the size of each examination booklet (in pages) and the number of students taking each exam.

The Problem

Given the number of different exams, the number of students taking each exam, and the number of pages necessary for each exam, calculate the fewest number of sheets of 17" x 11" paper the state can order to make all of their exams.

The Input

The first line of the input file will contain a single positive integer, n ($n \leq 20$), representing the number of years of data to process (number of input cases). The first line in each year of data will consist of a single positive integer, e ($e \leq 100$), representing the number of different exams given for that year. The following e lines will contain information about one exam each. Each of these lines will have two space-separated positive integers, s ($s \leq 10000$), representing the number of students taking that exam, and p ($p \leq 100$), the number of pages in a single exam booklet, for that exam.

The Output

For each year, output the total number of sheets of 17" x 11" paper that are needed, on a line by itself.

Sample Input

```
2
3
100 25
50 8
100 10
2
1000 100
2000 95
```

Sample Output

```
1100
73000
```