

## C: How to Eat at a Buffet



Instead of a seated meal, some restaurants offer all-you-can-eat buffet lunches and dinners. This is usually a bargain for famished students. Alice likes such buffet meals, but is always worried about how best to fill her plate with food. She values the  $n$  different items on the menu differently, and her goal is to have as much value as she can on her plate, constrained by the limited area of the plate and the limited availability of some menu items. Luckily, items on the menu are easily dividable and Alice can take an arbitrary fraction of each dish. Can you help her fill her plate?

### Input

The input is formed of  $n + 2$  lines:

- the first line consists of the number  $n$  of different items on the menu;
- the second line consists of the area  $a$  of Alice's plate, an integer in  $\text{mm}^2$ ;
- each of the  $n$  remaining lines consists of information about a menu item, as two integers separated with a space; the first one is the value  $v_i$  of item  $i$  per  $\text{mm}^2$ , as perceived by Alice; the second one is the area  $a_i$ , in  $\text{mm}^2$ , that item  $i$  would occupy if Alice were to transfer it fully to her plate.

### Limits

- $1 \leq n \leq 1\,000$
- $0 \leq a \leq 100\,000$
- For every  $0 \leq i \leq n - 1$ :
  - $0 \leq v_i \leq 100$ ;
  - $0 \leq a_i \leq 100\,000\,000$ .

### Output

A single line consisting of an integer: the maximal value that Alice can fit on her plate.

### Sample Input

```
5
1000
50 230
80 12
10 1000000
25 450
2 50
```

## Sample Output

26790