Physics Grade

Butch is afraid that he didn't do so well on his last Physics test. (Isn't it good enough that a bulldog can add and subtract numbers? Why does Mrs. Parker ask him to add and subtract vectors as well?)

He would like to know what letter grade he has right now, but he is too depressed about the test to do it himself.

Given N (0 < N \le 10) grades, each with a possible amount of points, Pi (0 \le Pi \le 200) and a score Si (0 \le Si \le Pi), find out what grade he would have if Ms. Parker truncates. The grading scale is as follows:

90 - 100 = A 80 - 89 = B 70 - 79 = C 60 - 69 = D 0 - 59 = F (Heaven forbid!)

(Note that the total points will always be more than 0)

Input

Line 1: A single integer, N Lines 2..N+1: Two space separated integers, Pi and Si

Output

Line 1: A single upper-case character representing the grade he got.

Example

Input: 3 100 89 75 75 100 72

Output:

В