

B. Vasya and Wrestling

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Vasya has become interested in wrestling. In wrestling wrestlers use techniques for which they are awarded points by judges. The wrestler who gets the most points wins.

When the numbers of points of both wrestlers are equal, the wrestler whose sequence of points is **lexicographically greater**, wins.

If the sequences of the awarded points coincide, the wrestler who performed the last technique wins. Your task is to determine which wrestler won.

Input

The first line contains number n — the number of techniques that the wrestlers have used ($1 \leq n \leq 2 \cdot 10^5$).

The following n lines contain integer numbers a_i ($|a_i| \leq 10^9$, $a_i \neq 0$). If a_i is positive, that means that the first wrestler performed the technique that was awarded with a_i points. And if a_i is negative, that means that the second wrestler performed the technique that was awarded with $(-a_i)$ points.

The techniques are given in chronological order.

Output

If the first wrestler wins, print string "first", otherwise print "second"

Examples

input
5
1
2
-3
-4
3
output
second

input
3
-1
-2
3
output
first

input
2
4
-4
output
second

Note

Sequence $x = x_1x_2...x_{|x|}$ is **lexicographically larger** than sequence $y = y_1y_2...y_{|y|}$ if either $|x| > |y|$ and $x_1 = y_1, x_2 = y_2, \dots, x_{|y|} = y_{|y|}$, or there is number r ($r < |x|, r < |y|$), that $x_1 = y_1, x_2 = y_2, \dots, x_r = y_r$ and $x_{r+1} > y_{r+1}$.

Codeforces Round #281 (Div. 2)

Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.


Start virtual contest

→ Problem tags

implementation

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 

We use notation $|a|$ to denote length of sequence a .

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