P0009. Solvent economies P91432_en

s
Being $S = s_1, s_2, \ldots, s_n$ a sequence of integers. Its *derivative* is the sequence

$$S' = (s_2 - s_1),\ (s_3 - s_2),\ \ldots\ ,\ (s_n - s_{n-1})$$

and its *second derivativeS″* is the derivative of S'.

A sequence is called *strictly increasing* if all the elements of its derivative are strictly greater than zero. A sequence is called *strictly convex* if all the elements of its second derivative are strictly greater than zero.

Stock indices (as the IBEX 35 or the NASDAQ) measure economies, and their evolution along the time can be seen like a sequence of integers. In this context, it is said that an economy is *solvent* if its sequence is strictly increasing (the wealth grows) or strictly convex (perhaps it does not grow but it tends to the growth).

For instance, $S = 1, 3, 10, 12$ reflects a solvent economy because is strictly increasing, although it is not strictly convex ($S' = 2, 7, 2$; $S'' = 5, -5$). $S = 3, -2, -4, -1, 5$ reflects a solvent economy also, because is strictly convex, although it is not strictly increasing ($S' = -5, -2, 3, 6$; $S'' = 3, 5, 3$).

Your task is to write a program that reads a sequence of, at least, three integers, and prints if they reflect a solvent economy or not.

Input

The input is a sequence of three or more integers.

Output

Your program must print textttsolvent economy" or "`not solvent economy`", depending on the result, in a line.

Sample input 1

```
1 3 10 12
```

Sample output 1

```
solvent economy
```

Sample input 2

```
3 -2 -4 -1 5
```

Sample output 2

```
solvent economy
```

Sample input 3

```
5 3 1
```

Sample output 3

```
not solvent economy
```

Sample input 4

```
-4 -3 -1
```

Sample output 4

```
solvent economy
```

Sample input 5

```
2 3 0 1
```

Sample output 5

```
not solvent economy
```

Problem information

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