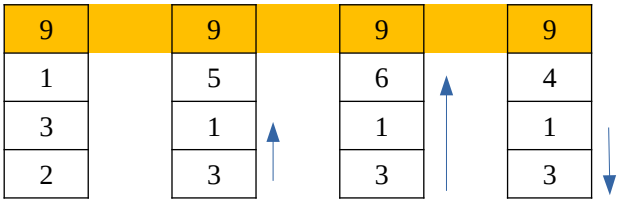
Rotating slot machine
1 second, 32 MB

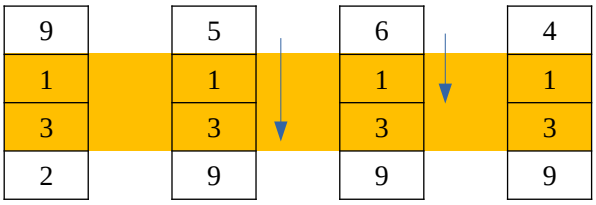
You have a special slot machine with a 4-row 4-column screen. When you hit "random," each cell in the screen will show a digit (from 0 to 9). Below shows an example of the result:

9	3	1	4
1	9	3	1
3	5	9	3
2	1	6	9

The score that you get is the number of rows that contain entirely the same digit. From the example above, you would score 0 points. However, this is a special slot machine. You can **"rotate"** each column either up or down. For example, you may rotate the second column up 1 step, the third column up 2 steps, and the forth column down 1 step. This result in the following screen:



And you would score 1 point! You can even do better by rotating the second column down 2 steps, the third column down 1 step, to get the following screen with 2 points, which is the best possible.



Write a program that read the original slot machine screen (with 4 rows and 4 columns), and calculate the maximum score that you can obtain by rotating the slot columns.

Input
The input contains 4 lines. Each line contains 4 integers, whose values are from 0 to 9.

Output
You program should output a single integer which is the maximum points you can score from the original slot screen. It is possible that you score the highest points without rotating any columns.

Example 1

Input	Output
9 3 1 4 1 9 3 1 3 5 9 3 2 1 6 9	2

Example 2

Input	Output
0 0 0 0 2 2 2 2 3 3 3 3 4 4 4 4	4

(Additional examples in the next page)

Example 3

Input	Output
1 1 1 2 2 2 2 3 3 3 3 4 4 4 4 9	3

Example 4

Input	Output
1 1 0 1 1 1 1 0 1 0 1 1 0 1 1 1	4

Remarks

The test cases are grouped into sets. A program that does nothing and outputs a single integer will not score any points.