Advertising

Gregor was appointed to be the marketing manager of the upcoming GCPC. The problem is that Gregor has absolutely no experience in making advertisement for such an event and, unfortunately, he is also very little talented. Desperately he remembers that big companies used to make advertisement by putting up posters - so he simply does the same. But when he asked people if they were coming to the GCPC, most of them did not even remember seeing the posters. So in the end he resorted to the best ad strategy he knew of - he just told everybody.

However, advertising is fickle — to be actually effective for somebody highly depends on who told the respective person about the event. If your best friend told you to participate with him in the GCPC, you would be a lot more likely to follow his advice than if some stranger told you on the way from one lecture to the next.

To measure this, Gregor assigns each person a "participation likelihood" (from 0 to 10), measuring how likely it is that the person participates in the GCPC. Naturally, the "participation likelihood" of a person is the maximum "friendship value" among the people that told him to participate. Friendship values range from 0 ("Don't even know who this is.") to 10 ("He/She is my favorite person to bake cookies with."), but do not have to be symmetric. You can assume that as long as their own participation likelihood is greater than 0, everyone will tell all people they know to participate as well. However, if the participation likelihood of a person is 0, then he does not tell anybody else about the event. As Gregor started the campaign, his participation likelihood is already 10.

Can you help Gregor predict the total influence his advertising campaign will have, i.e. the sum of participation likelihoods of all people?

Input

The input starts with a line containing n ($1 \leq n \leq 400$), the number of people Gregor knows. n lines follow, with the i-th line containing n integers denoting the friendship values values $friendship_{i,1}, \ldots, friendship_{i,n}$ where $friendship_{i,j}$ ($0 \leq friendship_{i,j} \leq 10$, $friendship_{i,i} = 0$) is the friendship value person i assigns to person j. Gregor is person 1.

Output

Output the sum of all participation likelihood values of all people.

Sample Input 1

```
4
0 0 0 1
5 0 0 0
1 5 0 5
1 10 5 0
```

Sample Output 1

```
30
```

Sample Input 2

```
5
0 0 1 6 0
0 0 10 9 0
0 9 0 0 0
0 2 0 0 0
4 0 0 0 0
```

Sample Output 2

```
14
```