1) [10 Marks] Sinking Ship

Lupin is training himself with simulation of a crisis scenario. This time, the crisis he simulated is sinking cruise ship.

A gigantic cruise ship is hit an underwater iceburg and is sinking. Water is flooding the bilge and passengers are evacuating to life boats. Lupin the thief, however, finds this to be the time that he can take valuable things of others without being caught. He has the map of all the valuable things he has targeted in his laptop computer. The captain announces that the ship is sinking at the rate of one floor per 2 minutes. During the trip, Lupin has installed a special climbing machine in a vertical duct that allow him to get to any of the passenger floor very fast. However, provided that the floor is still dry *when he reaches the floor*, it will take him 2 minutes to go from any position in the duct into any floor, run to the targeted valuable thing, grab it and return to the duct, even while water is filling up the floor.

The water will just reach the bottom floor right when Lupin starts his stealing. Lupin has to plan on which valuable things he can take. Lupin is keen on computer programming and he has a good idea. He quickly creates a program that helps him decide which valuable thing he has to go for at each two minutes, in such a way that the sum of values he takes will be the maximum possible.

Write a program that determine such the maximum possible total value that Lupin can take.

INPUT:

1st line : the number of floors n, $10 \leq n \leq 1000$

Each of the following n lines represents each floor from the top down to the bottom. Each line contains a list of integers representing values of things in the respective floor. There are at most 1000 valuable things in each floor. The value of each thing is at most $10000.

OUTPUT: The maximum total value that Lupin can take.

EXAMPLE

INPUT	OUTPUT
5 4 46 **56** 44 **52** 29 29 25 **54** 2 **55** 30 11 20 46 33 11 5 29 5 18 51 15 **68**	285

Note: the bold values are taken by Lupin