
Kill or Skip

Input file: **standard input**
Output file: **standard output**
Time limit: 1.5 seconds
Memory limit: 256 megabytes

After a long day of problem solving , Mtaylor decided to play a new game called Kill or Skip , the game consists of n monsters numbered from 1 to n , the games starts with the monster 1 then 2 .. and so on to n (you can't change the order) , at each level from 1 to n you can enter the room and kill the monster or skip the room and go to the next room .

But the game isn't that easy , when you enter the i 'th room you get hit first by dmg_i from the monster , then you can start shooting it , you need $ammo_i$ to kill it (if you ran out of ammo and the monster isn't dead , then your character will die) , but if you killed the monster you will be rewarded xp_i xp points , hp_i health points and ra_i additional ammo . You start the game with 100 health points and 100 ammo and this is the maximum possible that you can reach , that means if your health is 98 and you get 5 additional health points , your health points will be 100 and not 103 , same thing for the ammo .

But we know the game isn't fun without a magical spell , there is only one magical spell and you can use it only once (in only one room of your choice) , the magical spell square the xp points gained after killing a monster that mean instead of gaining xp you will get xp^2 .

Mtaylor is tired , so he asked you to help him to find a strategie to make the maximum xp points possible knowing that you start the game with 0 xp . Print that maximum score .

Input

The first line contains one integer n ($1 \leq n \leq 100$).

Then n lines , the i 'th one contains 5 integers dmg_i , $ammo_i$, xp_i , hp_i and ra_i ($1 \leq dmg_i$, $ammo_i \leq 100$, $0 \leq xp_i \leq 10000$, $0 \leq hp_i$, $ra_i \leq 100$).

Output

Print one integer the answer to the problem .