

Problem E. Powerless Mage

Input file: *standard input*
 Output file: *standard output*
 Time limit: 2 seconds (3 seconds for Java)
 Memory limit: 512 mebibytes

A mage knows n spells, the i -th of which requires q_i blue mana, w_i purple mana and e_i orange mana ($q_i + w_i + e_i > 0$). Let's say the mage has Q blue mana, W purple mana and E orange mana, and denote the total amount of mana $Q + W + E$ as R . Knowing that the mage is unable to cast any spell, what can be the maximal value of R ?

Input

The first line contains an integer n ($1 \leq n \leq 200000$) — the number of spells.

Each of the next n lines contains three integers q_i, w_i, e_i ($0 \leq q_i, w_i, e_i \leq 10^9, q_i + w_i + e_i > 0$) — the manacosts of the i -th spell.

Output

Output the maximal total amount of mana R such that the mage is unable to cast any spell.

If this number is infinitely large (for any total amount of mana R , there could be a situation so that the mage is unable to cast any spell), output "Infinity".

Examples

standard input	standard output
4 0 0 100 0 100 0 100 0 0 61 71 81	278
6 0 0 100 0 100 0 100 0 0 0 11 61 11 61 0 61 0 11	180
3 3 1 1 1 3 1 1 1 3	Infinity