Problem Z. Morning Sandwich

Time limit   2000 ms
Mem limit   262144 kB

Monocarp always starts his morning with a good ol' sandwich. Sandwiches Monocarp makes always consist of bread, cheese and/or ham.

A sandwich always follows the formula:

- a piece of bread
- a slice of cheese or ham
- a piece of bread
- . . .
- a slice of cheese or ham
- a piece of bread

So it always has bread on top and at the bottom, and it alternates between bread and filling, where filling is a slice of either cheese or ham. Each piece of bread and each slice of cheese or ham is called a layer.

Today Monocarp woke up and discovered that he has b pieces of bread, c slices of cheese and h slices of ham. What is the maximum number of layers his morning sandwich can have?

Input

The first line contains a single integer t ($1 \leq t \leq 1000$) — the number of testcases.

Each testcase consists of three integers b, c and h ($2 \leq b \leq 100; 1 \leq c, h \leq 100$) — the number of pieces of bread, slices of cheese and slices of ham, respectively.

Output

For each testcase, print a single integer — the maximum number of layers Monocarp's morning sandwich can have.

Examples

Input	Output
3 2 1 1 10 1 2 3 7 8	3 7 5

Note

In the first testcase, Monocarp can arrange a sandwich with three layers: either a piece of bread, a slice of cheese and another piece of bread, or a piece of bread, a slice of ham and another piece of bread.

In the second testcase, Monocarp has a lot of bread, but not too much filling. He can arrange a sandwich with four pieces of bread, one slice of cheese and two slices of ham.

In the third testcase, it's the opposite — Monocarp has a lot of filling, but not too much bread. He can arrange a sandwich with three pieces of bread and two slices of cheese, for example.