

Box Projections

Input file: **standard input**

Output file: **standard output**

For a positive integer d , let $[d] = \{1, 2, \dots, d\}$. You are given three positive integers a, b, c .

Consider a set $S \subseteq [a] \times [b] \times [c]$ of integer triples. It must satisfy all of the following conditions:

- for every $(x, y) \in [a] \times [b]$, at least one triple (x, y, z) belongs to S ;
- for every $(x, z) \in [a] \times [c]$, at least one triple (x, y, z) belongs to S ;
- for every $(y, z) \in [b] \times [c]$, at least one triple (x, y, z) belongs to S .

In other words, deleting any one coordinate from the triples in S must produce every possible pair of the other two coordinates. Determine the minimum possible value of $|S|$.

Input

The first line contains an integer T ($1 \leq T \leq 100$), the number of test cases.

For each test case, one line contains three integers a, b, c ($1 \leq a \leq 100, 1 \leq b \leq 100, 1 \leq c \leq 100$).

Output

For each test case, output one line containing a single integer, the minimum possible $|S|$.

Example

standard input	standard output
2	4
2 2 2	12
4 3 2	

Note

For $(a, b, c) = (2, 2, 2)$, one possible choice of S is:

$$S = \{(1, 1, 1), (1, 2, 2), (2, 1, 2), (2, 2, 1)\}$$

For $(a, b, c) = (4, 3, 2)$, one possible choice of S is:

$$S = \{(1, 1, 1), (1, 2, 1), (1, 3, 2), \\ (2, 1, 1), (2, 2, 2), (2, 3, 1), \\ (3, 1, 2), (3, 2, 2), (3, 3, 1), \\ (4, 1, 2), (4, 2, 1), (4, 3, 2)\}$$