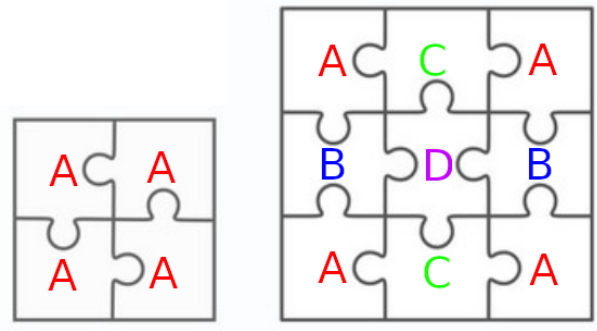
Puzzle

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes



2×2 and 3×3 rectangle examples, A, B, C, D represent four basic blocks

Little Y wants to play a type of puzzle that consists of four basic blocks, as shown in the image above. Little Y has A, B, C, D of these four types of blocks. Now he wants to use as many blocks as possible to form a rectangle (either a rectangle or a square). The question is, what is the maximum number of blocks he can use?

The formed rectangle must satisfy the following conditions:

1. Any two adjacent basic blocks must form a concave and convex structure;
2. The four edges of the formed rectangle must not have any protrusions or indentations;
3. Unlike common puzzle games, the blocks in this game do not have patterns, and blocks of the same type are considered identical.

Input

The first line contains a positive integer T ($1 \leq T \leq 10^4$), indicating the number of test cases.

For each test case, each line contains four integers A, B, C, D ($0 \leq A, B, C, D \leq 10^3$), representing the number of four types of basic blocks.

Output

Output n lines, each line containing an integer that indicates the maximum number of given blocks that can be used to form a rectangle. If it is not possible to form a rectangle, please output 0.

Example

standard input	standard output
2 4 0 0 0 4 4 4 4	4 16