

Problem D. Phone Desktop

Time limit 1000 ms

Mem limit 262144 kB

Little Rosie has a phone with a desktop (or launcher, as it is also called). The desktop can consist of several screens. Each screen is represented as a grid of size 5×3 , i.e., five rows and three columns.

There are x applications with an icon size of 1×1 cells; such an icon occupies only one cell of the screen. There are also y applications with an icon size of 2×2 cells; such an icon occupies a **square** of 4 cells on the screen. Each cell of each screen can be occupied by no more than one icon.

Rosie wants to place the application icons on the minimum number of screens. Help her find the minimum number of screens needed.

Input

The first line of the input contains t ($1 \leq t \leq 10^4$) — the number of test cases.

The first and only line of each test case contains two integers x and y ($0 \leq x, y \leq 99$) — the number of applications with a 1×1 icon and the number of applications with a 2×2 icon, respectively.

Output

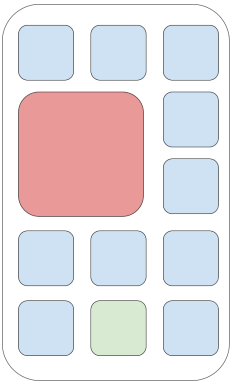
For each test case, output the minimal number of required screens on a separate line.

Examples

Input	Output
11 1 1 7 2 12 4 0 3 1 0 8 1 0 0 2 0 15 0 8 2 0 9	1 1 2 2 1 1 0 1 1 2 5

Note

The solution for the first test case can look as follows:



Blue squares represent empty spaces for icons, green squares represent 1×1 icons, red squares represent 2×2 icons

The solution for the third test case can look as follows:

