











DESCRIPTION CLARIFICATIONS



BASE TIME LIMIT: 1 SECOND | MEMORY LIMIT: 200 MB | CONTEST CONTEST NATAL 2022 / CHRISTMAS CONTEST 2022 BY BEECROWD NATAL

beecrowd | K A ND game

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Every year, children who behave well and have good grades at school write letters to Santa Claus saying which gift they want to receive from the good old man. However, the elves noticed that several boys and girls are sad because they cannot receive gifts because of their grades not being so good. Anderson, the chief elf, and Santa Claus decided to present these children with a game that helps them improve their mathematical logical reasoning and memory.

The game is based on the Sudoku puzzle, in this version, the subgrids have a dynamic size not just being 3x3, following the same rules as the original game. However, some elves said that this might be too difficult for some children and suggested that the children just say the sum of the grid values for a D dimension. And they asked you, the master programming elf, to develop the game.

For example, for a subgrid with $\mathbf{D} = 2$ we have the grid in the figure below with sum = 40.



Input

The first line has an integer $1 \le \mathbb{R} \le 10^3$ indicating the number of rounds in the game. Then follows **R** lines each an integer $2 \le \mathbf{D} \le 10^3$ indicating the size of the sub grid.

Output

The output consists of \mathbf{R} lines each with an integer corresponding to the correct answer for the round.

Samples Input	Samples Output
3	40
2	405
3	2176
4	

