

# Blocks

Donald wishes to send a gift to his new nephew, Fooey. Donald is a bit of a traditionalist, so he has chosen to send a set of  $N$  classic baby blocks. Each block is a cube, 1 inch by 1 inch by 1 inch. Donald wants to stack the blocks together into a rectangular solid and wrap them all up in brown paper for shipping. How much brown paper does Donald need?

## Input

The first line of input contains  $T$ , the number of test cases. For each case there is an additional line containing  $N$ , the number of blocks to be shipped.  $N$  does not exceed 1000.

## Output

Your program should produce one line of output per case, giving the minimal area of paper (in square inches) needed to wrap the blocks when they are stacked together.

## Example

Input :	Output :
5	30
9	34
10	82
26	54
27	130
100	