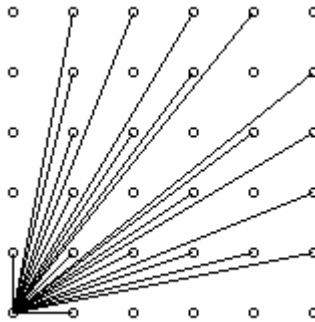




## F • Visible Lattice Points

A lattice point  $(x, y)$  in the first quadrant ( $x$  and  $y$  are integers greater than or equal to 0), other than the origin, is *visible* from the origin if the line from  $(0, 0)$  to  $(x, y)$  does not pass through any other lattice point. For example, the point  $(4, 2)$  is not visible since the line from the origin passes through  $(2, 1)$ . The figure below shows the points  $(x, y)$  with  $0 \leq x, y \leq 5$  with lines from the origin to the visible points.



Write a program which, given a value for the size,  $N$ , computes the number of visible points  $(x,y)$  with  $0 \leq x, y \leq N$ .

### Input

The first line of input contains a single integer  $C$ , ( $1 \leq C \leq 1000$ ) which is the number of datasets that follow.

Each dataset consists of a single line of input containing a single integer  $N$ , ( $1 \leq N \leq 1000$ ), which is the size.

### Output

For each dataset, there is to be one line of output consisting of: the dataset number starting at 1, a single space, the size, a single space and the number of visible points for that size.

Sample Input	Sample Output
4	1 2 5
2	2 4 13
4	3 5 21
5	4 231 32549
231	