Q4: Triple Play

Given integer N (where $7 \leq N \leq 100$) you are to output in ascending order the set of all triples (X_0, X_1, X_2) such that:

- each element X_i is a perfect square (that is, $X_i = k * k$ for some integer k)
- the numbers X_0, X_1, X_2 form an arithmetic sequence with $X_1 = X_0 + h$ and $X_2 = X_1 + h$ for some integer h
- X_0, X_1, X_2 are each $\leq N^2$

For example, "1 25 49" forms such a triple because each number is a perfect square, and the arithmetic sequence is formed with $h = 24$. In fact, this is the smallest such triple.

Input

The input will be an integer N on a line by itself where $7 \leq N \leq 100$.

Output

Your output will contain a number of lines, each of which contains three values – X_0, X_1, X_2 – separated by a single space. Each subsequent line of output is presented in sorted canonical order. That is, triple "$y_0\ y_1\ y_2$" appears after "$x_0\ x_1\ x_2$" if:

- $y_0 > x_0$
- ($y_0 = x_0$) and ($y_1 > x_1$)

Sample Input and Output

Input	Output
10	1 25 49
20	1 25 49
	4 100 196
	49 169 289
28	1 25 49
	4 100 196
	9 225 441
	16 400 784
	49 169 289
	49 289 529
24	1 25 49
	4 100 196
	9 225 441
	49 169 289
	49 289 529