A. Split the Herd

time limit per test: 0.5 s
memory limit per test: 256 MB
input: standard input
output: standard output

Have you heard of the story about splitting the herd?

{ *An Arab Sheik, who has eleven camels, finding himself about to die, called his sons about him and said: "Divide my camels among you in the proportion of one-half of the herd to the eldest son, the second son one-fourth, and to the youngest son one-sixth."*

Thereupon the oldest son cried: "O, my father, one-half, one-fourth, and one-sixth do not constitute a whole. To whom, therefore, shall the remainder of the herd be given?"

"To any poor man who may be standing by when the division is made," replied the Sheik, who thereupon died.

When the herd was collected a new difficulty arose. The number of the camels could not be divided either by two or three or nine. While the brothers were disputing, a poor but crafty Bedouin, standing by with his camel, exclaimed, "Behold, I will sell you my beast for ten pieces of silver, so that you may then divide the herd."

Seeing that the addition of one camel would solve the difficulty, the brothers jumped at the offer, and proceeded to divide the herd, but when each had received his allotted portion there yet remained one camel.

"I am the poor man standing by." Said the crafty Bedouin, and gaily mounting the camel, he rode away, with the ten pieces of silver in his turban. }

On the occasion of Thanksgiving, old David is having a similar situation where he has decided to distribute his rafter of N turkeys among his three sons. He wants to play a similar trick with his sons and see if they are clever enough to see it. He will tell his sons that each of them will get $1/a$, $1/b$ and $1/c$ of the rafter respectively, where a, b and c are positive integers. These fractions would not sum up to 1, but if some wise man comes and lent them an extra turkey, the turkeys can then be divided nicely and the wise man can bring his turkey back.

Old David wants to know with what N he can possibly play this trick. The classic story can be seen as when $N = 11$.

Input

Input is a positive integer N, the number of turkeys in the rafter.

For 20% of the inputs, $N \leq 12$. For 50% of the inputs, $N \leq 1000$. For 100% inputs, $N \leq 10^9$.

Output

If such a split is possible, output one line with three integers a, b and c, separated by a single space. If there are multiple solutions, output any one of them. Otherwise, if no such split is possible, output "0 0 0".

Examples

input	Copy
11	
output	**Copy**
2 4 6	

input	Copy
1	
output	**Copy**
0 0 0	

input	Copy
5	
output	**Copy**
3 3 6	