Paper

Slavko decided to challenge Mirko! He gave him a real number P and a bag full of pieces of paper with exactly one number 1-5 written on each paper. There is an unlimited quantity of each type of paper.

Mirko's task is to pick the minimum number of papers in a way that the average of the numbers written on them equals exactly P.

Input

First and only line of input contains real number P. P will have between 1 and 9 decimal places, inclusive (1 ≤ P ≤ 5).

Output

First and only line of output should contain five nonnegative integers - numbers of ones, twos, threes, fours and fives used, respectively. If there are multiple solutions, output any one of them.

Sample input   **Sample output**

Sample input	Sample output
5.0	0 0 0 0 1
4.5	0 0 0 1 1
3.20	0 0 4 1 0