

H. Multiplication Table

time limit per test: 2 seconds
memory limit per test: 64 megabytes
input: standard input
output: standard output

Petya studies positional notations. He has already learned to add and subtract numbers in the systems of notations with different radices and has moved on to a more complicated action — multiplication. To multiply large numbers one has to learn the multiplication table. Unfortunately, in the second grade students learn only the multiplication table of decimals (and some students even learn it in the first grade). Help Petya make a multiplication table for numbers in the system of notations with the radix k .

Input

The first line contains a single integer k ($2 \leq k \leq 10$) — the radix of the system.

Output

Output the multiplication table for the system of notations with the radix k . The table must contain $k - 1$ rows and $k - 1$ columns. The element on the crossing of the i -th row and the j -th column is equal to the product of i and j in the system of notations with the radix k . Each line may have any number of spaces between the numbers (the extra spaces in the samples are put for clarity).

Examples

input									
10									
output									
1	2	3	4	5	6	7	8	9	
2	4	6	8	10	12	14	16	18	
3	6	9	12	15	18	21	24	27	
4	8	12	16	20	24	28	32	36	
5	10	15	20	25	30	35	40	45	
6	12	18	24	30	36	42	48	54	
7	14	21	28	35	42	49	56	63	
8	16	24	32	40	48	56	64	72	
9	18	27	36	45	54	63	72	81	

input	
3	
output	
1	2
2	11