

Snail

Description

Once upon a time, a snail that really loved mathematics was living in Adama. He loved writing some numbers on his shell spirals. For example, $n=5$,

21	22	23	24	25
20	7	8	9	10
19	6	1	2	11
18	5	4	3	12
17	16	15	14	13



Print the number arrangement of snail.

Input

Your program is to read from standard input. The input consists of T ($1 \leq T \leq 10$) test cases. The number of test cases T is given in the first line of input. For each case you are given odd number n on a single line, ($1 \leq N < 1,000$)

Output

Your program is to write to standard output. For each test case, you should print the number arrangement of snail separate by 4 space. Your output should be formatted in such a way that each number takes up a width of **5** using the following:

Sample

Input

Output

2	7	8	9		
3	6	1	2		
5	5	4	3		
	21	22	23	24	25
	20	7	8	9	10
	19	6	1	2	11
	18	5	4	3	12
	17	16	15	14	13