Problem A. A with As

We love the alphabet A so much that in this problem, you have to print out a large A using A-s.

More specifically, you are given an odd positive integer $n = 2k + 1$, which will be the number of lines you should print. Each line should contain exactly $2n - 1$ characters.

- For the first line, you should print $n - 1$ dots '.', one 'A', and $n - 1$ dots '.'.
- For the i-th line ($2 \leq i \leq k$), you should print $n - i$ dots '.', one 'A', $2i - 3$ dots '.', and one 'A' again, and then $n - i$ dots '.'.
- For the $k + 1$-th line, you should print k dots '.', n 'A's, and then k dots '.'.
- For the j-th line ($k + 2 \leq j \leq n$), you should print $n - j$ dots '.', one 'A', $2j - 3$ dots '.', and one 'A' again, and then $n - j$ dots '.'.

Given n, write a program that prints a large "A" like the description above.

Input

Your input consists of an arbitrary number of records, but no more than 10.

Each input record is a line that contains only an *odd* integer n ($3 \leq n \leq 81$).

The end of input is indicated by a line containing only the value -1.

Output

For each input record, print n lines that contains a large A with 'A's.

Example

Standard input	Standard output
3 7 -1	..A.. .AAA. A...A ......A...... .....A.A..... ....A...A.... ...AAAAAAA... ..A.......A.. .A.........A. A...........A

Time Limit

1 second.