Aby and Land Plan

Aby is designing a rectangular land plan with a side length of N meters. For this reason, he wants to create a program to visualize the landform he wants.

Input

Input consist of multiple test case. The first line of input is T, denote the number of test case. The following T lines, there is only one integer N, the side length in meter.

Output

For every test case, print the visualized rectangular land plan. For the exact details, please look at the example.

Example

Input:
```
3
1
2
5
```

Output:
```
#

##
##

#####
#...#
#...#
#...#
#####
```

Constraint

- 1 <= N <= 100