Character Patterns (Act 2)

Using two characters: . (dot) and * (asterisk) print a frame-like pattern.

Input

You are given *t* - the number of test cases and for each of the test cases two positive integers: *l* - the number of lines and *c* - the number of columns of a frame.

Output

For each of the test cases output the requested pattern (please have a look at the example). Use one line break in between successive patterns.

Example

Input:
```
3
3 1
4 4
2 5
```

Output:
```
*

*

*


****
*..*
*..*
****


*****
*****
```