

Character Patterns (Act 4)

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

Input

You are given t - the number of test cases and for each of the test cases four positive integers: l - the number of lines, c - the number of columns in the grid; h and w - the high and the width of the single rectangle.

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:

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3
3 1 2 1
4 4 1 2
2 5 2 2
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Output:

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