

# Recursion Practice

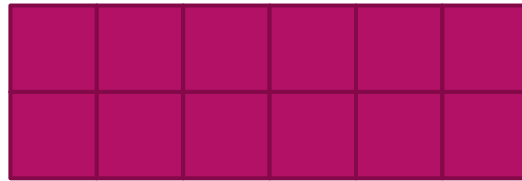
## Recursion Practice:

1. trace the computation for the tower of Hanoi like P.3

2. Find the number of ways a  $2 \times n$  rectangle can be tiled with rectangular tiles of size  $2 \times 1$



$2 \times 1$



$2 \times 6$

## Practice (Optional):

3. Enter a string and print out all permutations of the characters in the string.

Example:

Input: abc

Output: abc, acb, bac, bca, cab, cba

4. Enter a string and print out all combinations of the characters in the string.

Example:

Input: abc

Output: a, b, c, ab, bc, ac, abc



The practice will be checked in this lab class or the next lab class(before **Mar.6**) by teachers or SAs.

Question 3 and 4 are optional, just describe ideas, don't have to write code.

This practice will contribute **1 mark** to your overall grade. Late submissions within 2 weeks after the deadline (Mar.6) will incur a 20% penalty, meaning that you can only get 80% of the score.