

Permutations Yet Again, Once More

Problem 1. Remember there are six permutations of "ABC". Can you list all the permutations so that each permutation can be made from the last by an exchange of two letters, and so that you can go from the last permutation back to "ABC" also with an exchange of two letters?

Problem 2. Also remember there are 24 permutations of "ABCD". Can you list all the permutations so that each permutation can be made from the last by an exchange of two letters, and so that you can go from the last permutation back to "ABCD" with an exchange of two letters? Hint: Try to use your solution for Problem 1 to solve this problem.

Problem 3. Finally, can you extend your method to work for a five letter word like "ABCDE"?