

## Day 1

1. Find Missing Number **[Easy]** **[Apple, Facebook, Amazon, Microsoft]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/1005/find-missing-number/18/module-5-problem-solving>

2. Find Majority Element in an array **[Easy]** **[Amazon, Microsoft, Bloomberg]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/612/find-majority-element-in-an-array/18/module-5-problem-solving>

3. Rotate array **[Medium]** **[Microsoft, Facebook, Amazon, Apple]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/1041/rotate-array/18/module-5-problem-solving>

4. Single Number **[Easy]** **[Facebook, Microsoft, Amazon]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/609/single-number/18/module-5-problem-solving>

5. How many numbers are smaller than current number **[Easy]** **[Amazon]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/1289/how-many-numbers-are-smaller-than-the-current-number-problem-statement-leetcode/18/module-5-problem-solving>

Practice problems:

1. Given an integer array of size  $n$ , find all elements that appear more than  $\lfloor n/3 \rfloor$  times.

Follow-up: Could you solve the problem in linear time and in  $O(1)$  space? **[Medium]** **[Google, Amazon]**

Practice link: <https://leetcode.com/problems/majority-element-ii/>

2. Given a character array *s*, reverse the order of the words.

A word is defined as a sequence of non-space characters. The words in *s* will be separated by a single space.

Your code must solve the problem in-place, i.e. without allocating extra space. **[Medium] [Microsoft]**

Practice link: <https://leetcode.com/problems/reverse-words-in-a-string-ii/>

4. Given an integer array *nums*, in which exactly two elements appear only once and all the other elements appear exactly twice. Find the two elements that appear only once. You can return the answer in any order.

You must write an algorithm that runs in linear runtime complexity and uses only constant extra space. **[Medium] [Facebook]**

Practice link: <https://leetcode.com/problems/single-number-iii/>