

1. Array product problem **[Medium]** **[Facebook, Amazon, Apple, Microsoft]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/1039/array-product-problem/18/module-5-problem-solving>

2. Find two missing in a sequence of consecutive numbers **[Medium]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/1042/find-two-missing-numbers-in-a-sequence-of-consecutive-numbers/18/module-5-problem-solving>

3. Find two repeating elements in an array **[Medium]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/625/find-two-repeating-elements-in-an-array/18/module-5-problem-solving>

4. Merge Overlapping intervals **[Medium]** **[JPMorgan, Facebook, Amazon, Apple, Bloomberg, Microsoft, Adobe, Google, Uber, eBay, Salesforce, VMware, Cisco]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/1124/merge-overlapping-intervals/18/module-5-problem-solving>

5. Rotate Matrix by 90 degrees **[Medium]** **[Amazon, Microsoft, Apple, Uber, Adobe, Cisco]**

<https://interviewprep.appliedroots.com/lecture/2/interview-preparation-course/619/rotate-matrix-by-90-degrees/18/module-5-problem-solving>

## Practice Questions:

1. Given an array of integers `nums` containing  $n + 1$  integers where each integer is in the range  $[1, n]$  inclusive.

There is only one repeated number in `nums`, return this repeated number.

You must solve the problem without modifying the array `nums` and uses only constant extra space. **[Medium] [Microsoft, Amazon, Apple, Bloomberg, Adobe, Paypal]**

Practice link:

<https://leetcode.com/problems/find-the-duplicate-number/>

2. Given a set of non-overlapping intervals, insert a new interval into the intervals (merge if necessary).

You may assume that the intervals were initially sorted according to their start times. **[Medium] [Google, Twitter, Amazon, Apple, Uber]**

Practice link: <https://leetcode.com/problems/insert-interval/>

3. Given two  $n \times n$  binary matrices `mat` and `target`, return true if it is possible to make `mat` equal to `target` by rotating `mat` in 90-degree increments, or false otherwise. **[Easy] [Amazon]**

<https://leetcode.com/problems/determine-whether-matrix-can-be-obtained-by-rotation/>