

Top 50 Question to prepare for specialist Programmer  
(Arnabi Mitra)

1. Find the power of a number  $\text{pow}(x,n)$  in  $\log|x|$  time (Note: Don't use power function)  
<https://leetcode.com/problems/powx-n/>  
  
Solution: <https://youtu.be/MZbTZqeY49M>
2. Minimum operation to make equal  
<https://leetcode.com/problems/minimum-operations-to-make-array-equal/>
3. Count Prime(Learn Sieve Algorithm)  
<https://leetcode.com/problems/count-primes/>  
  
Solution: [https://youtu.be/RYRZTd\\_wVUc](https://youtu.be/RYRZTd_wVUc)
4. Modulo Multiplication on inverse  
<https://practice.geeksforgeeks.org/problems/modular-multiplicative-inverse-1587115620/1>
5. Count ways to express even number 'n' as the sum of even integers  
<https://www.geeksforgeeks.org/count-ways-express-even-number-n-sum-even-integers/>
6. Prime Sum  
<https://www.interviewbit.com/problems/prime-sum/>  
  
Solution: <https://youtu.be/kBdteZBJdYs>
7. Largest Coprime Divisor  
<https://www.interviewbit.com/problems/largest-coprime-divisor/>
8. Check if Possible to move(Don't check the solution try to do by yourself)  
<https://www.geeksforgeeks.org/check-possible-move-given-coordinate-desired-coordinate/>
9. Number of ways to split n!  
<https://www.geeksforgeeks.org/count-ways-to-split-n-into-two-distinct-co-prime-factors/?ref=rp>
10. Next Permutation  
<https://leetcode.com/problems/next-permutation/>
11. Previous Permutation with one swap  
<https://leetcode.com/problems/previous-permutation-with-one-swap/>
12. Generate lexicographically smallest Permutation of 1 to N where elements follow given relation(Important)

<https://www.geeksforgeeks.org/generate-lexicographically-smallest-permutation-of-1-to-n-where-elements-follow-given-relation/>

13. Find all permutation

<https://leetcode.com/problems/permutations/>

14. Decode ways

<https://leetcode.com/problems/decode-ways/>

15. Buy and sell stocks

<https://leetcode.com/problems/best-time-to-buy-and-sell-stock/>

16. Buy and sell stocks 2

<https://leetcode.com/problems/best-time-to-buy-and-sell-stock-ii/>

17. House Robber

<https://leetcode.com/problems/house-robber/>

18. House Robber 2

<https://leetcode.com/problems/house-robber-ii/>

19. Coin Change

<https://leetcode.com/problems/coin-change/>

20. Coin change 2

<https://leetcode.com/problems/coin-change-2/>

21. Subarray sum

<https://leetcode.com/problems/subarray-sum-equals-k/>

22. Longest Palindromic Substring

<https://leetcode.com/problems/longest-palindromic-substring/>

23. Longest Increasing subsequence

<https://leetcode.com/problems/longest-increasing-subsequence/>

24. Merge Intervals

<https://leetcode.com/problems/merge-intervals/>

25. K-closest Point to the origin

<https://leetcode.com/problems/k-closest-points-to-origin/>

26. Minimum Deletions to Make Character Frequencies Unique

<https://leetcode.com/problems/minimum-deletions-to-make-character-frequencies-unique/>

27. Container with most water

<https://leetcode.com/problems/container-with-most-water/>

28. Minimum Increment/decrement to make array elements equal

<https://www.geeksforgeeks.org/minimum-increment-decrement-to-make-array-elements-equal/>

29. Gas station

<https://leetcode.com/problems/gas-station/>

30. Minimum cost to move

<https://leetcode.com/problems/minimum-cost-to-move-chips-to-the-same-position/>

31. Largest Odd number in a string

<https://leetcode.com/problems/largest-odd-number-in-string/>

32. Make parentheses valid by minimum addition

<https://leetcode.com/problems/minimum-add-to-make-parentheses-valid/>

33. Search in rotated sorted position

<https://leetcode.com/problems/search-in-rotated-sorted-array/>

34. Find peak element

<https://leetcode.com/problems/find-peak-element/>

35. Reach A number

<https://leetcode.com/problems/reach-a-number/>

36. Capacity To Ship Packages Within D Days

<https://leetcode.com/problems/capacity-to-ship-packages-within-d-days/>

37. Allocate Books

<https://www.interviewbit.com/problems/allocate-books/>

38. Maximize the sum of  $arr[i]*i$

<https://www.geeksforgeeks.org/maximize-sum-arr-i/>

39. Set matrix zero(without using extra space)

<https://www.interviewbit.com/problems/set-matrix-zeros/>

40. Repeating and Missing elements (Without using extra space)

<https://www.interviewbit.com/problems/repeat-and-missing-number-array/>

41. Rank of permutation

<https://www.interviewbit.com/problems/sorted-permutation-rank/>

42. Possible to survive

<https://www.geeksforgeeks.org/survival/>

43. Island Perimeter  
<https://leetcode.com/problems/island-perimeter/>
44. Max area of Island  
<https://leetcode.com/problems/max-area-of-island/>
45. Number of Islands  
<https://leetcode.com/problems/number-of-islands/>
46. Course schedule  
<https://leetcode.com/problems/course-schedule/>
47. Course schedule 2  
<https://leetcode.com/problems/course-schedule-ii/>
48. Combination Sum  
<https://leetcode.com/problems/combination-sum/>
49. Subsets  
<https://leetcode.com/problems/subsets/>
50. Median of Two sorted array  
<https://leetcode.com/problems/median-of-two-sorted-arrays/>
51. Check if two Binary Strings can be made equal by doing bitwise XOR of adjacent  
<https://www.geeksforgeeks.org/check-if-two-binary-strings-can-be-made-equal-by-doing-bitwise-xor-of-adjacent/>
52. Find K numbers in a given range [L, R] such that their bitwise XOR is X  
<https://www.geeksforgeeks.org/find-k-numbers-in-a-given-range-l-r-such-that-their-bitwise-xor-is-x/>
53. Count of possible pairs whose sum and bitwise XOR is given  
<https://www.geeksforgeeks.org/count-of-possible-pairs-whose-sum-and-bitwise-xor-is-given/>
54. Count of x in given range such that bitwise XOR of x, (x+1) and (x+2), (x+3) are equal  
<https://www.geeksforgeeks.org/count-of-x-in-given-range-such-that-bitwise-xor-of-x-x-1-and-x2-x3-are-equal/>
55. Count total set bits in all numbers from 1 to n  
<https://www.geeksforgeeks.org/count-total-set-bits-in-all-numbers-from-1-to-n/>
56. Find the longest sequence of 1's in binary representation with one flip

<https://www.geeksforgeeks.org/find-longest-sequence-1s-binary-representation-one-flip/>

57. Increasing Subsequences

<https://leetcode.com/problems/increasing-subsequences/>

58. Beautiful Arrangement

<https://leetcode.com/problems/beautiful-arrangement/>

59. Find Kth Largest XOR Coordinate Value

<https://leetcode.com/problems/find-kth-largest-xor-coordinate-value/>

60. Bitwise AND of Numbers Range

<https://leetcode.com/problems/bitwise-and-of-numbers-range/>

61. Chopping carrots

<https://codeforces.com/problemset/problem/1706/D1>

62. Shifting string

<https://codeforces.com/problemset/problem/1690/F>

63. Batchgold Problem

<https://codeforces.com/problemset/problem/749/A>

64. Strange Partition

<https://codeforces.com/problemset/problem/1471/A>

65. String LCM

<https://codeforces.com/problemset/problem/1473/B>

66. Make them odd

<https://codeforces.com/problemset/problem/1277/B>

67. Mere array

<https://codeforces.com/problemset/problem/1401/C>

68. K-th divisor

<https://codeforces.com/problemset/problem/762/A>

69. Vladik and fraction

<https://codeforces.com/problemset/problem/743/C>

70. Find maximum

<https://codeforces.com/problemset/problem/353/C>

