1. Input an integer array to store up to n elements, the value of each element satisfied $1 \leq a[i] \leq 100$.
2. Input an integer array to store n distinct elements.
3. Given a positive integer X, input an integer array to store up to n prime numbers satisfied $a[i] \leq X$.
4. Sum/Product of elements in an integer array.
5. Sum/Product of negative elements in an integer array.
6. Sum/Product of divisor 4 and 6.
7. Sum/Products of prime/square/perfect elements in an integer array.
8. Sum/Products of distinct elements in an integer array.
9. Calculate the averaging of elements in an integer array.
10. Sum/Products of positive/negative elements in an integer array.
11. Sum of non-repeating elements in an integer array.
12. Sum of all even elements having their previous element even.
13. Calculate geometrical average of all positive elements in an integer array.
14. Maximum/minimum element finding.
15. Search for maximum negative element/minimum positive element (position/value).
16. Search for the highest repeating element (position/value).
17. Search for the highest repeating prime element (position/value).
18. Search for element closest to x.
19. Count number of occurrences of elements in an array.
20. Count number of positive/negative/prime elements in an array.
21. Count number of increasing/decreasing sequences.

    Eg: 1 5 4 2 11 12 9 8 15 =>

    Number of increasing sequences: 3

22. Count for number of distinct elements in an array.
23. Checking for existence of element x.
24. Checking for the presence of two consecutive positive element.
25. Checking for the presence of an element is the average of its two adjacent elements.
26. Checking for ascending/descending-order sorted array.
27. Checking for an all-prime array.
28. Checking for an array containing distinct elements.
29. Checking for array containing positive-negative interleaved element.
30. Checking for array containing odd-even interleaved element.

31. Checking for an array containing ascending-order sorted positive elements.
32. Checking for palindrome array.
33. Creating an array containing only positive/negative/prime/square elements.
34. Creating an array containing distinct elements.
35. Generating an array b such that $b[i]$ equals to the occurrences of element $a[i]$.
36. Generate an array b such that $b[i]$ equals to the number of elements that are greater than $a[i]$ and precede $a[i]$.
37. Sort an array in ascending/descending order.
38. Sort all negative elements in an array in ascending/descending order.
39. Sort an array such that positive elements are sorted in ascending order and negative elements are sorted in descending order.
40. Rearrange an array such that the elements satisfied the following requirements:

- Positive elements are placed at the start of the array and ascending-sorted.

- Negative elements are placed at the middle of the array and descending-sorted.

- Zeroes are placed at the end of the array.

41. Merge two ascending-order arrays into a single ascending array (without using any sorting algorithms).