

1. **Activity selection problem:** Given a set of activities, along with the starting and finishing time of each activity, find the maximum number of activities performed by a single person assuming that a person can only work on a single activity at a time.

Example

3,7

2,4

5,8

6,9

1,11

10,12

0,3

Output: 3

2. **Minimize the sum of Product:** You are given two arrays, A and B, of equal size N. The task is to find the minimum value of $A[0] * B[0] + A[1] * B[1] + \dots + A[N-1] * B[N-1]$, where shuffling of elements of arrays A and B is allowed.

Example 1:

Input:

N = 3

A[] = {3, 1, 1}

B[] = {6, 5, 4}

Output:

23

Explanation:

$1*6+1*5+3*4 = 6+5+12$

= 23 is the minimum sum

Example 2:

Input:

N = 5

A[] = {6, 1, 9, 5, 4}

B[] = {3, 4, 8, 2, 4}

Output:

80

Explanation:

$2*9+3*6+4*5+4*4+8*1$

= $18+18+20+16+8$

= 80 is the minimum sum

3. **Find maximum equal sum of every three stacks:** Given three stacks of the positive numbers, the task is to find the possible equal maximum sum of the stacks with the removal of top elements allowed. Stacks are represented as an array, and the first index of the array represent the top element of the stack.

Input : stack1[] = { 3, 10}

stack2[] = { 4, 5 }

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stack3[] = { 2, 1 }
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Output : 0

Sum can only be equal after removing all elements
from all stacks.