**#include <bits/stdc++.h>**

**using namespace std;**

**// Matrix Ai has dimension p[i-1] x p[i]**

**// for i = 1 . . . n**

**int MatrixChainOrder(int p[], int i, int j)**

**{**

**if (i == j)**

**return 0;**

**int k;**

**int mini = INT\_MAX;**

**int count;**

**for (k = i; k < j; k++)**

**{**

**count = MatrixChainOrder(p, i, k)**

**+ MatrixChainOrder(p, k + 1, j)**

**+ p[i - 1] \* p[k] \* p[j];**

**mini = min(count, mini);**

**}**

**// Return minimum count**

**return mini;**

**}**

**// Driver Code**

**int main()**

**{**

**int arr[] = { 1, 2, 3, 4, 3 };**

**int N = sizeof(arr) / sizeof(arr[0]);**

**// Function call**

**cout << "Minimum number of multiplications is "**

**<< MatrixChainOrder(arr, 1, N - 1);**

**return 0;**

**}**

