

Coding Report

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| Roll Number | 24csu068 |
| Date of Challenge | 19th March 2025 |

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Problem #1: **Perfect Cube**

* Break Down of Problem statement to reach solution(algorithm/pseudocode/steps chosen to solve problem)

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| First we took the input of the elements of array and then processed the product of two random elements and counted the number of products of two random numbers that made a perfect cube. |

* Solution of Problem with code(screenshot along with complete code)

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| #include <iostream>  #include<cmath>  using namespace std;  bool cube(int n){  int cube;  for(int i=1;i<n;i++)  {  cube=i\*i\*i;  if(cube==n)  {  return true;  }  if(cube>n)  {  return false;  }  }  }  int main() {  int N;  cout << "Enter the size of the array: ";  cin >> N;  // Dynamically allocate an array of size N  int\* arr = new int[N];  for (int i = 0; i < N; i++) {  cout << "Enter array element " << i + 1 << ": ";  cin >> arr[i];  }  cout << "Array elements are: ";  for (int i = 0; i < N; i++) {  cout << arr[i] << " ";  }  cout << endl;  //delete[] arr;  int count =0;  for(int a=0;a<N;a++){  int product=1;  for(int b=b+1;b<N;b++){  product\*=arr[a]\*arr[b];  double cuberoot=cbrt(N);  if(cuberoot==round(cuberoot)){  count++;  }  }  }  cout<<count;  return 0;  /\* int n;  cin >> n;  int arr[n];  for(int i=0;i<n;i++){  cin>>arr[i];  }  int count =0;  for(int i=0;i<n;i++){  int product=1;  for(int j=i+1;j<n;j++){  product\*=arr[i]\*arr[j];  if(cube(product)){  count++;  }  }  }  cout<<count; \*/  } |

* Test cases explanation(with all set of inputs and outputs)

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Problem #2: **Repair Work**

* Break Down of Problem statement to reach solution(algorithm/pseudocode/steps chosen to solve problem)

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* Solution of Problem with code(screenshot along with complete code)

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* Test cases explanation(with all set of inputs and outputs)

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