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| **Max product of three in C++** | |
| #include <iostream>  #include <vector>  #include <climits>  using namespace std;  int maxProduct(vector<int>& nums) {  int min1 = INT\_MAX, min2 = INT\_MAX;  int max1 = INT\_MIN, max2 = INT\_MIN, max3 = INT\_MIN;  for (int val : nums) {  if (val > max1) {  max3 = max2;  max2 = max1;  max1 = val;  } else if (val > max2) {  max3 = max2;  max2 = val;  } else if (val > max3) {  max3 = val;  }  if (val < min1) {  min2 = min1;  min1 = val;  } else if (val < min2) {  min2 = val;  }  }  return max(min1 \* min2 \* max1, max1 \* max2 \* max3);  }  int main() {  vector<int> nums = {2, 4, 6, 7};  int result = maxProduct(nums);  cout << result << endl;  return 0;  } | **Input:**  nums = {2, 4, 6, 7}  **🔍 Variables Tracked:**   | **Iteration** | **val** | **max1** | **max2** | **max3** | **min1** | **min2** | | --- | --- | --- | --- | --- | --- | --- | | 1 | 2 | 2 | INT\_MIN | INT\_MIN | 2 | INT\_MAX | | 2 | 4 | 4 | 2 | INT\_MIN | 2 | 4 | | 3 | 6 | 6 | 4 | 2 | 2 | 4 | | 4 | 7 | 7 | 6 | 4 | 2 | 4 |   **✅ Computed Products:**   * min1 \* min2 \* max1 = 2 \* 4 \* 7 = 56 * max1 \* max2 \* max3 = 7 \* 6 \* 4 = 168   **🧠 Output:**  return max(56, 168); // → 168 |
| 168 | |