

Solution 1

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 using System;
4 using System.Collections.Generic;
5
6 public class Program {
7     // O(n^2) time | O(n) space
8     public static List<int[]> ThreeNumberSum(int[] array, int targetSum) {
9         Array.Sort(array);
10        List<int[]> triplets = new List<int[]>();
11        for (int i = 0; i < array.Length - 2; i++) {
12            int left = i + 1;
13            int right = array.Length - 1;
14            while (left < right) {
15                int currentSum = array[i] + array[left] + array[right];
16                if (currentSum == targetSum) {
17                    int[] newTriplet = {array[i], array[left], array[right]};
18                    triplets.Add(newTriplet);
19                    left++;
20                    right--;
21                } else if (currentSum < targetSum) {
22                    left++;
23                } else if (currentSum > targetSum) {
24                    right--;
25                }
26            }
27        }
28        return triplets;
29    }
30 }
31
```

Solution 1   Solution 2   Solution 3

```
1 using System.Collections.Generic;
2
3 public class Program {
4     public static List<int[]> ThreeNumberSum(int[] array, int targetSum) {
5         // Write your code here.
6         return null;
7     }
8 }
9
```

**Run or submit code when you're ready.**