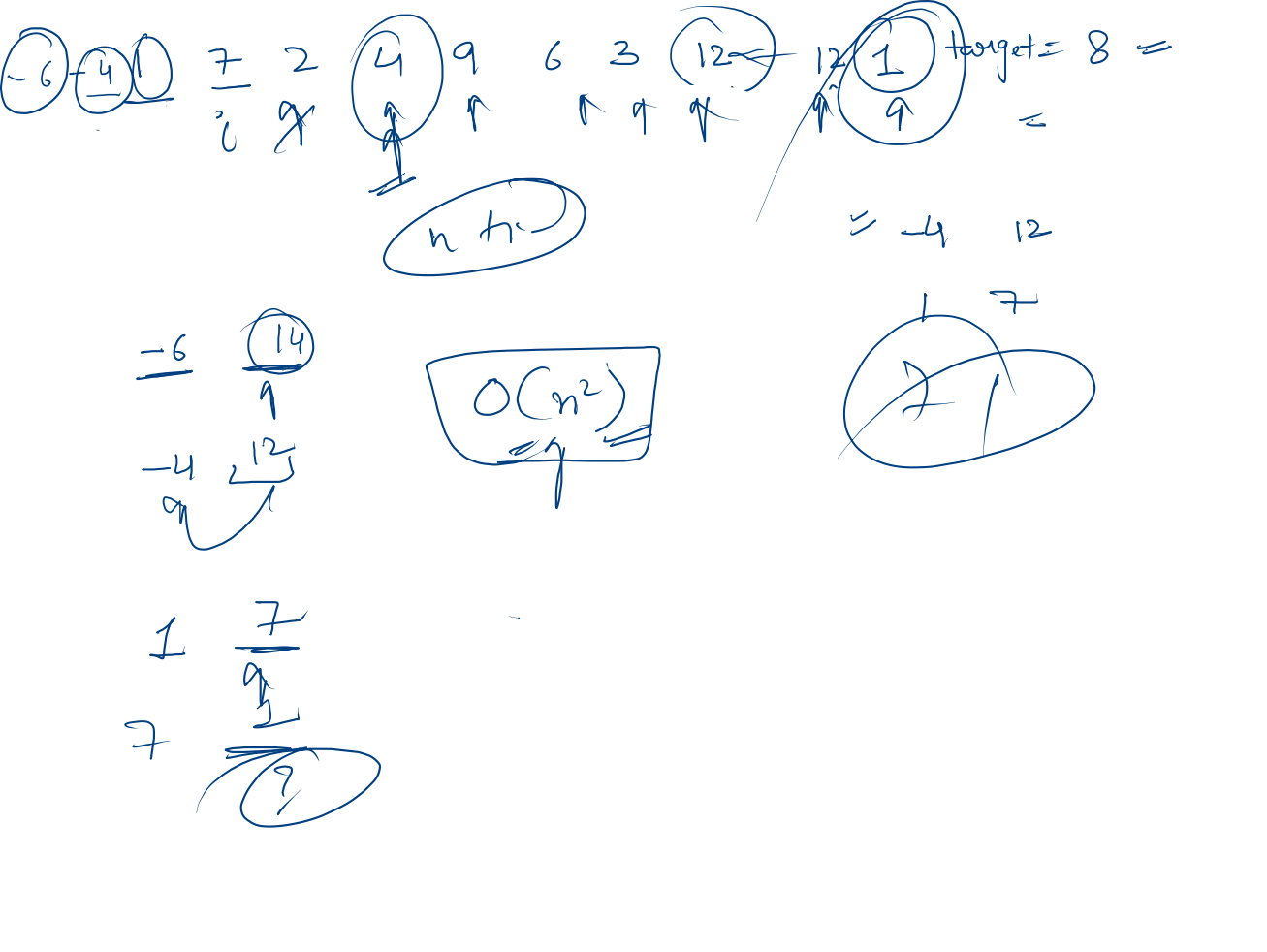
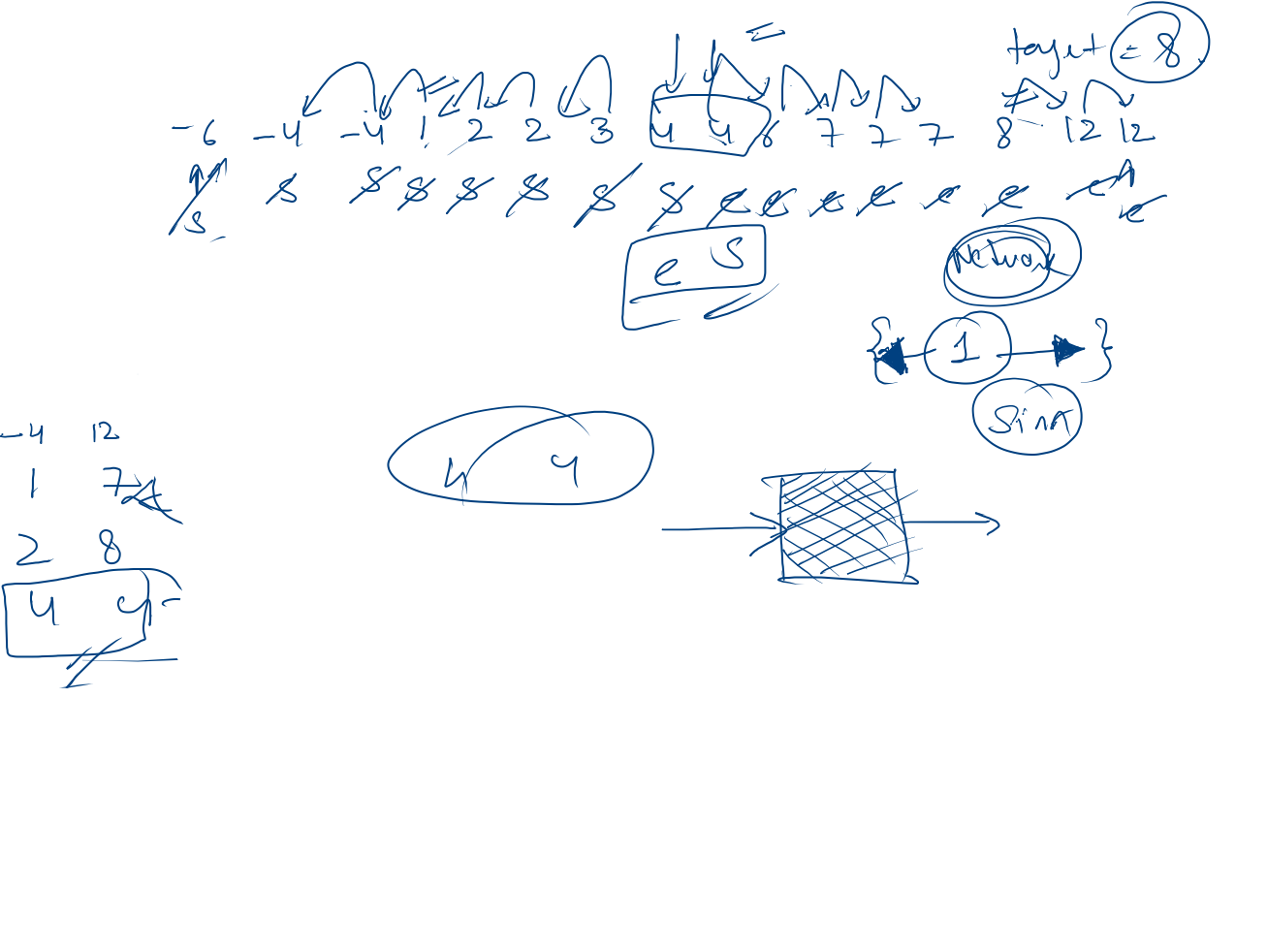
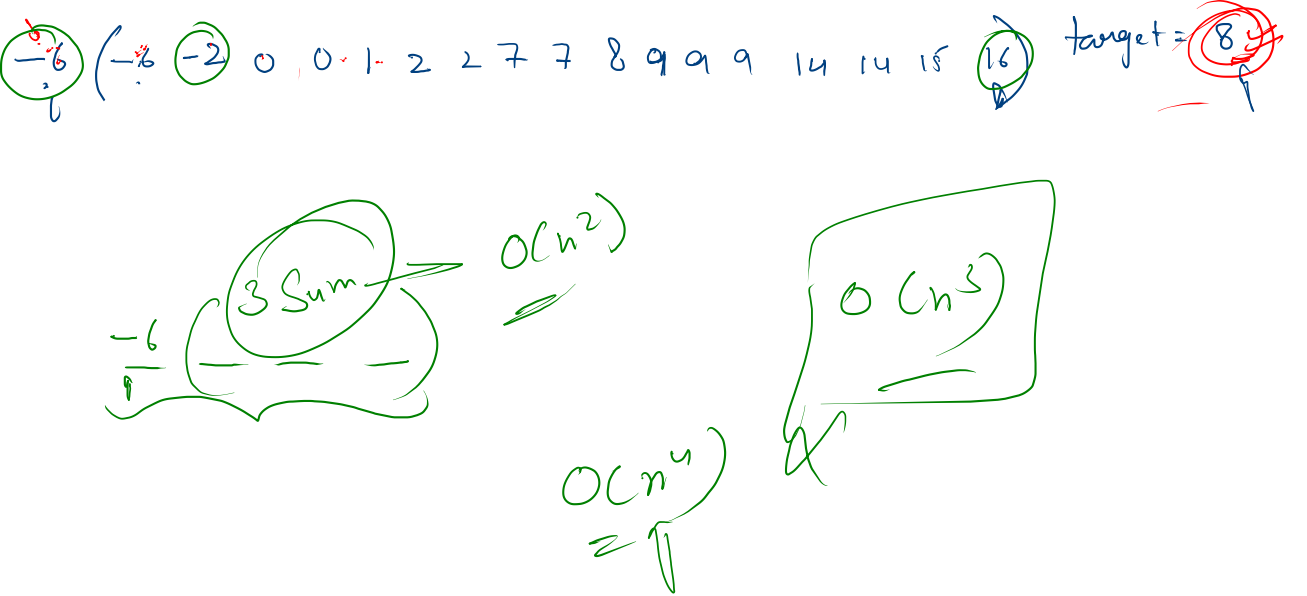

-6 -4 1 7 2 4 9 6 3 12 12 1 target = 8
i
nth
-6 14
-4 12
O(n²)
1 7
7 1

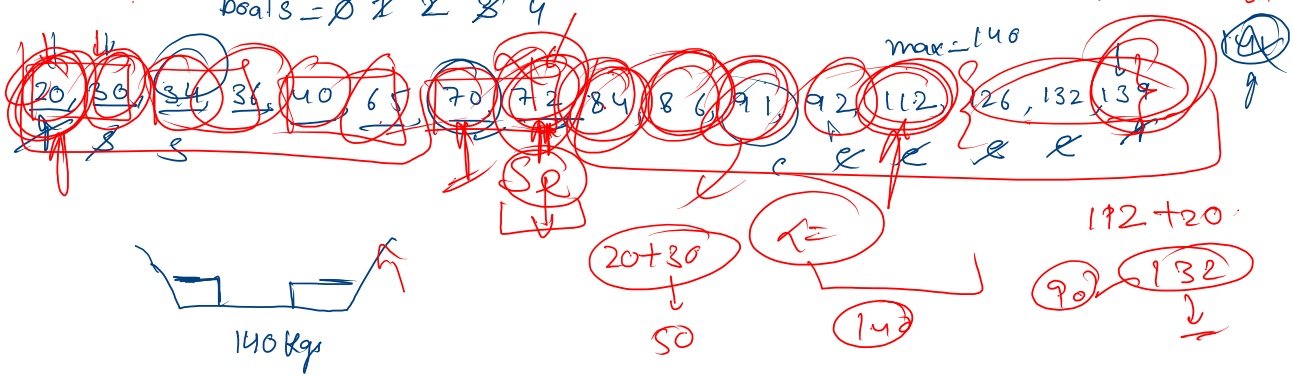

target = 8
-6 -4 -4 1 2 2 3 4 4 6 7 7 7 8 12 12
es
Network
1
Sink
-4 12
1 7
2 8
4 4

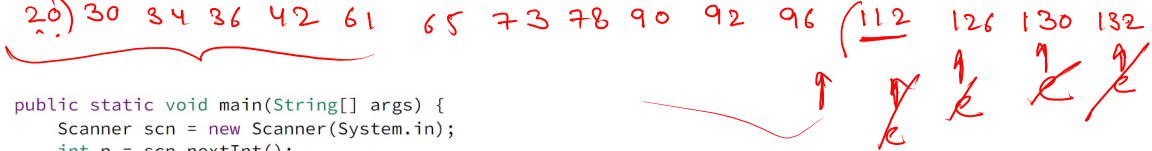

-6 -6 -2 0 0 1 2 2 7 7 8 9 9 9 14 14 15 16
target = 8
3 Sum
O(n²)
-6
O(n³)
O(n⁴)

139, 84, 49, 70, 39, 20, 91, 86, 34, 36, 92, 65, 72, 132, 112, 126

20 30 34 36 46 65 70 72 84 86 91 92 112 126 132 139

goals = ∅ ✗ ✗ ✗ ✓






```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int arr[] = new int[n];
    for(int i = 0; i < n; i++){
        arr[i] = scn.nextInt();
    }
    int limit = scn.nextInt();
    System.out.println(getBoats(arr , limit));
}

public static int getBoats(int[] wts, int cap) {
    Arrays.sort(wts);
    int s = 0, e = wts.length - 1;
    int ans = 0;
    while(s <= e) {
        int sum = wts[s] + wts[e];
        if(sum <= cap) s ++;
        e --;
        ans ++;
    }
    return ans;
}
```

Prefix Array

```
public static int[] getPrefixArray(int[] arr) {
    int n = arr.length, gsf = arr[0], ans[] = new int[n];
    for(int i = 0; i < n; i ++) {
        if(arr[i] > gsf) gsf = arr[i];
        ans[i] = gsf;
    }
    return ans;
}
```