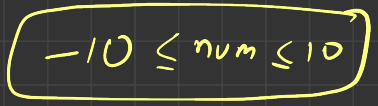
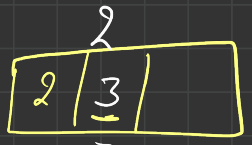
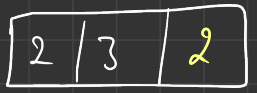
Permutation 2

$-10 \le num \le 10$



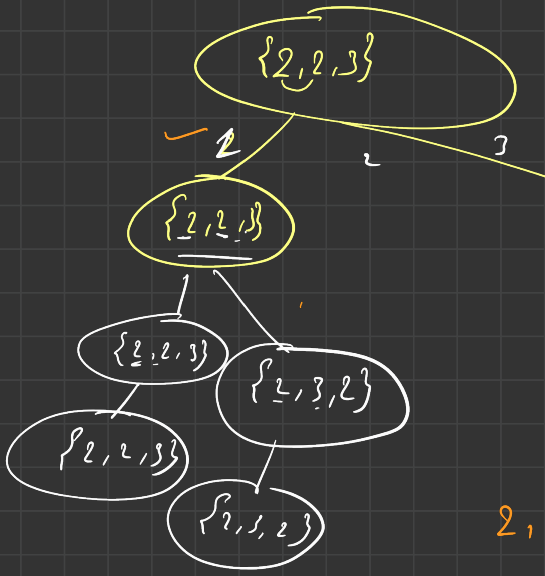


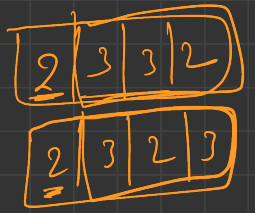


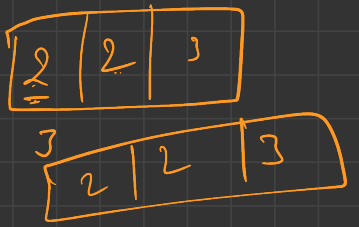
2, 2, 3

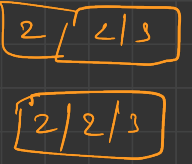
2, 3, 2

3, 2, 2







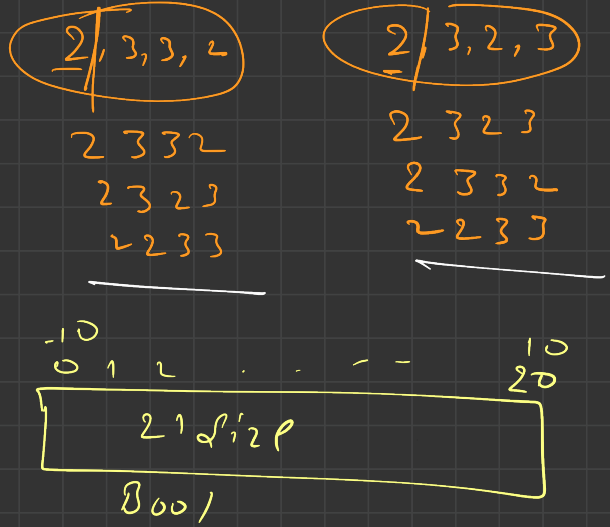


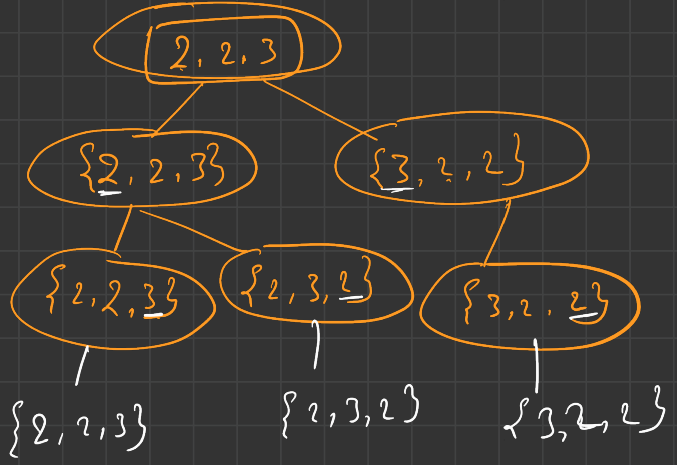
$\frac{3!}{2!} = 3$

2, 2, 3, 3

$\frac{4!}{2! \times 2!} = \frac{24}{4} = 6$

2, 2, 3, 3





1, 1, 2, 2

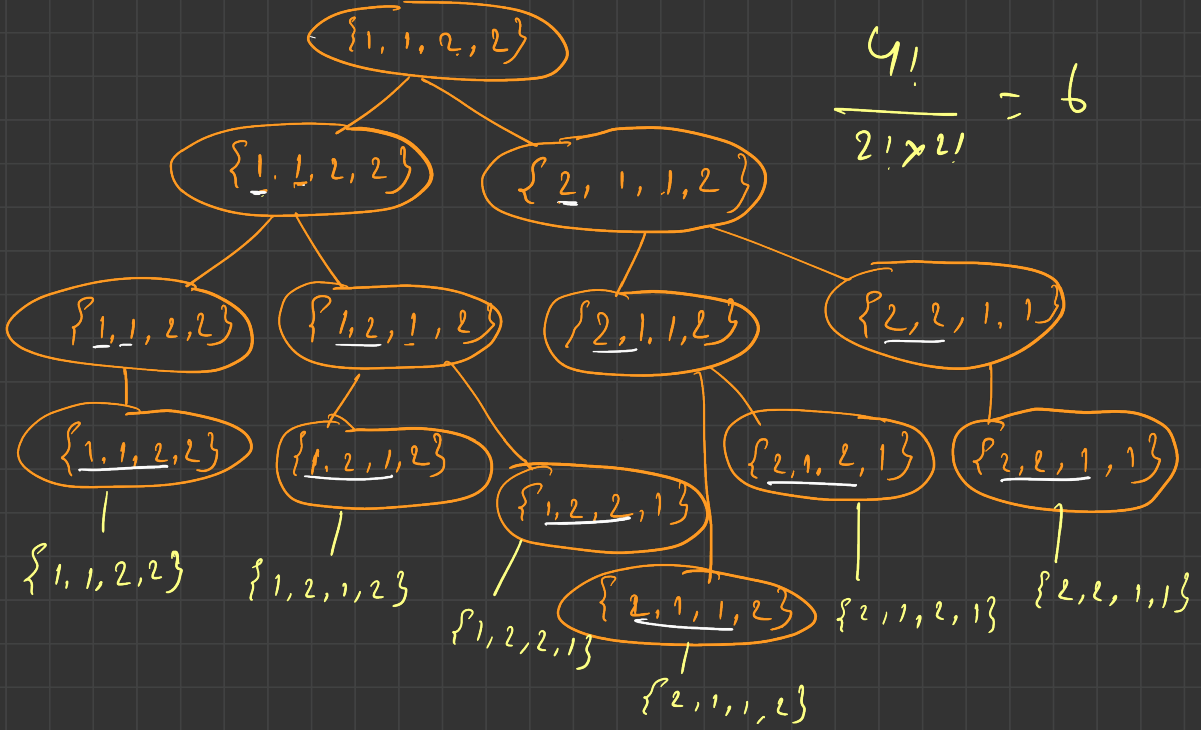
2, 2, 1, 2

1, 2, 2, 1

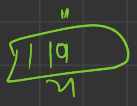
2 1 1 2

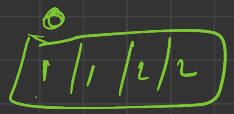
2 1 2 1

2 2 1 1



$$\frac{4!}{2! \times 2!} = 6$$





1 ≠ 10

11

```
void Permut(vector<int>& arr, vector<vector<int>>& ans,
    int index) {
  if (index == arr.size()) {
      ans.push_back(arr);
      return;
    }
    vector<bool> use(21, 0);
    for(i=index; i< arr.size(); i++) {
      if (use[arr[i] +10] == 0){
          swap(arr[index], arr[i]);
          permut(arr, ans, index+1);
          swap(arr[index], arr[i]);
          use[arr[i] +10] = 1;
      }
    }

}
```

Ways to sum to N

1	5	6

m

Sum = 7

1+1+1+1+1+1+1 = 7

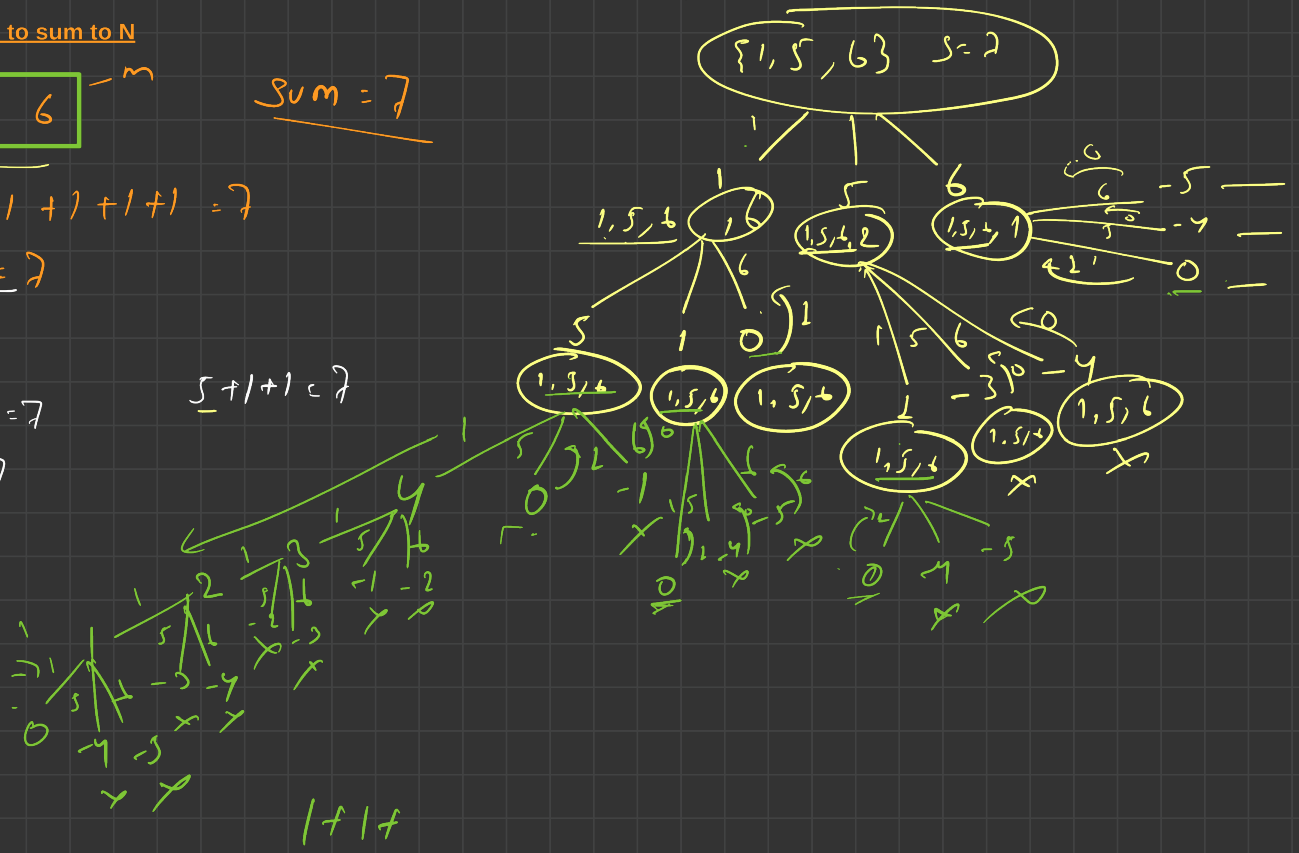
1+1+5 = 7

1+6 = 7

1+5+1 = 7

6+1 = 7

5+1+1 = 7



```
int way(int arr[], int m, int sum){
    if(sum==0)
        return 1;
    if(sum<0);
        return 0;
    }

    for(i:0; i<m; i++){
        ans+=way(arr, m, sum-arr[i]);
    }
    return ans;
}
```