


hw5_pr2.py > ...

```
1 # This problem is pseudopolynomial
2
3 # Subproblem - The subproblem is to add all other indexes other than the current index
4 # After add to possible sums that can be achieved using a subset of nums
5
6 # Relation - each new sum is formed by either including the current number or excluding it
7 # (e.g. newDP.add(t + num) and newDP.add(t))
8
9 # Topological Order - the topological order is increasing for i in nums array
10
11 # Base - dp.add(0)
12
13 # Original - partition_iter(nums)
14
15 # Time -  $O(n * s)$ 
```

hw5_pr3.py > ...

```
1 # This problem is pseudopolynomial
2
3 # Subproblem - take all the cost that don't equal the current house paint cost and find the minimum
4
5 # Relation -  $dp[i][j] = costs[i][j] + \min(dp[i-1][k] \text{ for } k \text{ in range(numOfColors) if } k \neq j)$ 
6
7 # Topological Order - From left to right iterating over the houses
8
9 # Base -  $dp[0] = costs[0]$ 
10
11 # Original - costToPaint(n)
12
13 # Time -  $O(n * m)$ 
14
```