

Problem 4

Using bottoms up strategy to calculate the table

COUNT(x)

counts \leftarrow an array of size $n+1$ to store number of ways for each integer up till x . With all values initialized to 0

counts[0] \leftarrow 1 This is going to be the base case

WHILE(p is not equal to n)

 q = p

 WHILE(q is not equal to $n+1$)

 counts[q] \leftarrow counts[q] + counts[q-p]

return \leftarrow counts[n]