

PARTITION EQUAL SUBSET SUM

Date: / /

Pick / Non Pick \Rightarrow Given arr, target.

$f(ind, target)$

{

if (target == 0) return true

if (ind == 0) return (arr[0] == target)

nottake = $f(ind - 1, target)$

take = false

if (arr[ind] < target)

take = $f(ind - 1, target - arr[ind])$;

return take/nottake

TABULATION

$dp[n][target]$

for (int ind = 0 \rightarrow n-1) $dp[ind][0] = \text{true}$.

if (arr[0] \leq target) $dp[0][arr[0]] = \text{true}$ } Base cases

for (int i = 1 \rightarrow n-1) {

for (int target = 1 \rightarrow k) {

nottake = $dp[i-1][target]$

take = ~~false~~;

if (arr[i] \leq target)

take = $dp[i-1][target - arr[i]]$

$dp[i][target] = \text{take}/\text{nottake}$