

## 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 (ind = 0  $\rightarrow$  n-1)  $dp[ind][0] = true$ ;

if (arr[0] <= target)  $dp[0][arr[0]] = true$  } Base case

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

for (target = 1  $\rightarrow$  k) {

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

take = ~~true~~ false;

if (arr[i] <= target)

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

$dp[i][target] = take/nottake$