

[1,3,5]  
Target = 6

1 (1)  
2 (1,1)  
3 (1,1,1) (3)  
4 (1,1,1,1) (3,1) (1,3)  
5 (1,1,1,1,1) (3,1,1) x 3 (5)

1 →  
1 →  
2 →  
3  
5

and so on

cf [1, 3, 5] carry  $\alpha = 6$

$i = 1$   $j = 0$   $num[j] = 1$

$$dp[1] = dp[1] + dp[0]$$

$$dp[1] = dp[0] + 1 = 1$$

$i = 1$   $j = 1$   $num[j] = 3$

brk

$i = 2$   $j = 0$   $num[j] = 1$

$$\begin{aligned} dp[2] &= dp[2] + dp[1] \\ &= dp[2] + 1 = 1 \end{aligned}$$

$i = 2$   $j = 1$   $num[j] = 3$

brk

$i = 3$   $j = 0$   $num[j] = 1$

$$\begin{aligned} dp[3] &= dp[3] + dp[2] \\ dp[3] &= 0 + 1 = 1 \end{aligned}$$

$i = 3$   $j = 1$   $num[j] = 3$

$$\begin{aligned} dp[3] &= dp[3] + dp[0] \\ 1 + 1 &= 2 \end{aligned}$$

$i = 3$   $j = 2$   $num[j] = 5$

brk

$$i = 4 \quad j = 0 \quad \text{num}[j] = 1$$

$$\begin{aligned} dp[4] &= dp[4] + dp[4-1] \\ dp[4] &= 0 + 2 = 2 \end{aligned}$$

$\nwarrow dp[3]$

$$i = 4 \quad j = 1 \quad \text{num}[j] = 3$$

$$\begin{aligned} dp[4] &= dp[4] + dp[4-3] \\ &= 2 + 1 \\ dp[4] &= 3 \end{aligned}$$

and so on until we reach  
 $dp[\text{target}]$