

Coin Change

$(n+1 \times t_{n+1}) \rightarrow dp$

0 1 2 3 4 5 6 7 8 9 10 11

0
1 ← 1
2 ← 2
5 ← 3

				1, 2							

$dp(i,j) \rightarrow$ min number of coins I need to make jth amount using 0 to i coins

$$M \rightarrow$$

integer max value

Coin Change

	0	1	2	3	4	5	6	7	8	9	10	11
0	M	M	M	M	M	M	M	M	M	M	M	M
0	0	1	2	3	4	5	6	7	8	9	10	11
1	0	1	1	2	2	3	3	4	4	5	5	6
2	0	1	1	2	2	1	2	2	3	3	2	3

min $\left[\begin{array}{l} inc \rightarrow 1 + dp[i][j] - arr[i-1] \\ exc \rightarrow dp[i-1][j] \end{array} \right]$

ChNP

2 1

$$\begin{array}{c} \downarrow \\ \vdots \\ \text{h} \\ \text{M} \\ \text{h} \\ \text{h} \\ \text{h} \end{array}$$
$$\begin{matrix} 2 \\ n \\ 1 \\ 1 \\ 1 \\ 1 \end{matrix}$$

3
m



\downarrow
 $\cancel{+} \cancel{-}$ $(M) = (-M)$
 $(M) - 1 \quad \quad \quad -1 M - 1$

Partition Equal Subset Sum

$$[1, 5, 11, 5] = 22 \checkmark \begin{matrix} \boxed{}^T \\ \boxed{}^F \end{matrix}$$

$$tar = \frac{22}{2} = 11$$

$$[1, 2, 3, 5] = 11 \times \rightarrow F$$

if arr sum is odd -> return false

↓
tar

~~X~~

11

↓ ↓ ↓
0 1 2 3 5 6 7 8 9 10 11

6
1
2
3
11
5

0	T	F	F	.	-	-	-	.	-	-	-	.
1	T	T	T	T								
2	T	T	T	T	T	T	.	.				
3	T			⊗				⊗				
4	T							⊗				

m[

Unique Paths II



