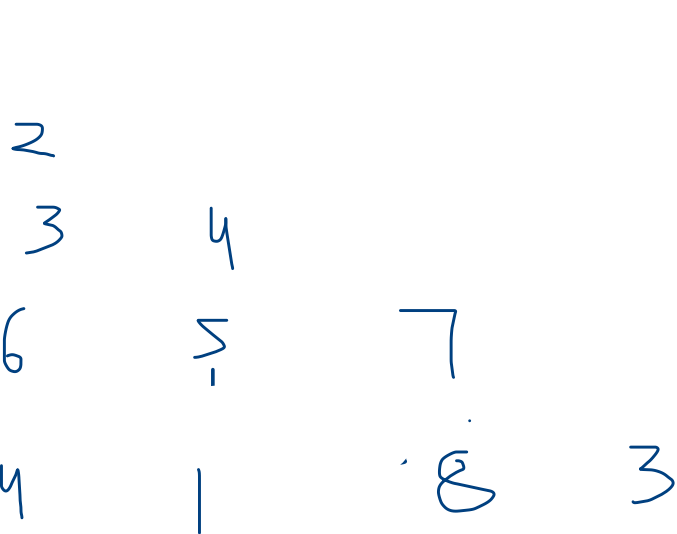


Triangle



	0	1	2	3	4
0					
1					
2					
3			.	.	
4					

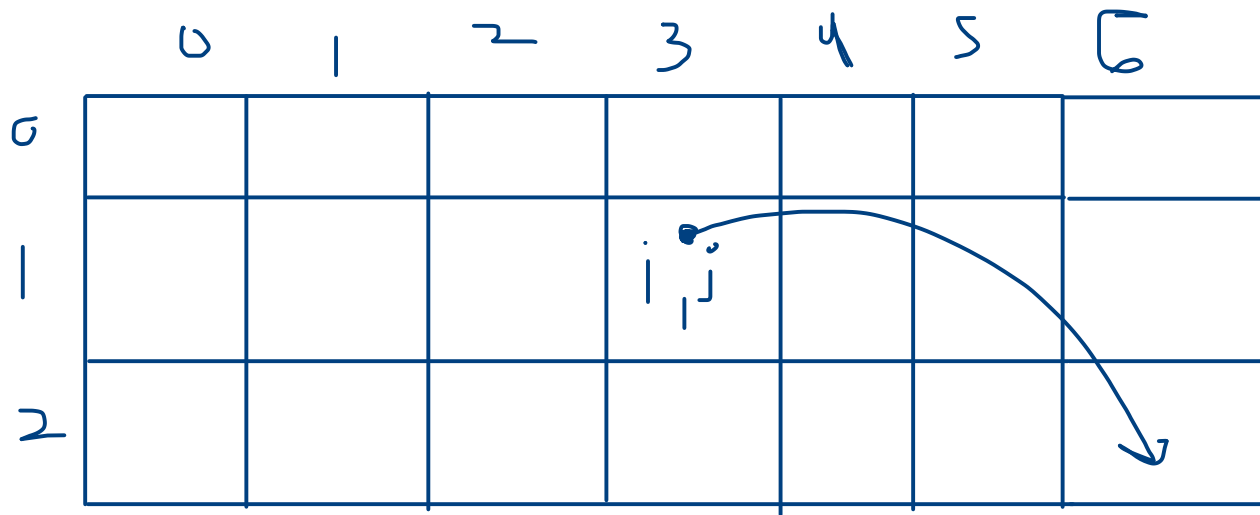
bottom is destination

$m = 4$

Unique Paths I

$$m = 3$$

$$n = 7$$



	0	1	2	3	4	5	6
0	28	21	15	16	6	3	1
1	7	6	5	3+1 =4	3	2	1
2	1	1	1	1	1	1 →	1

2,6

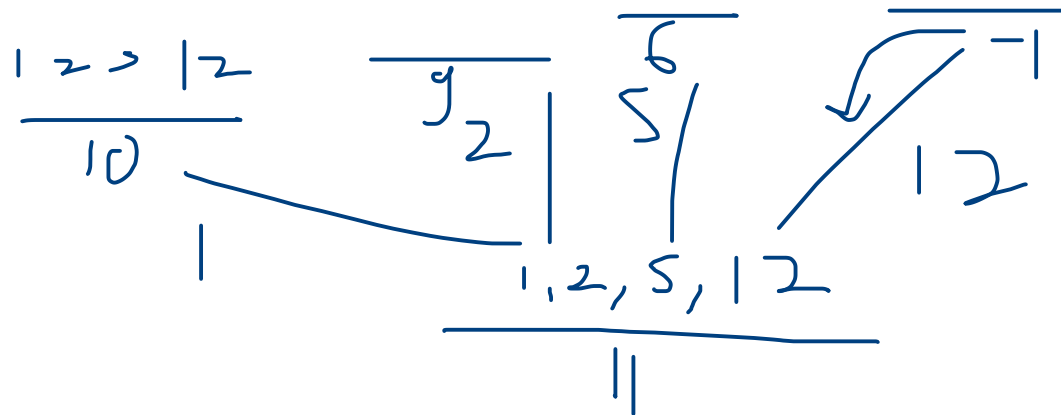
Coin Change

A hand-drawn diagram of a cell, represented by a rounded rectangle. Inside the cell, there are two vertical lines, one on the left and one on the right, representing chromosomes. A curved line at the top of the cell indicates a nuclear envelope or membrane.

$$1 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \rightarrow 6$$
$$1 \quad 5 \quad 5 \quad \rightarrow 3$$

1, 2, 5, 12

t=11



1, 2, 5

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

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

1, 2, 5

11 0

1 ← 1

(2) ← 2

3 ← 3

(1)

↓

	0	1	2	3	4	5	6	7	8	9	10	11
0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1	0				0							
2	0		1+0		i, j				0			
3	0											

Arrows in the grid indicate a path from (2,4) to (1,5) to (2,6) to (3,7).

$2 < 4$

$2 < 4 \rightarrow m$
 $\quad \quad \quad \rightarrow n$

$2 < 7$

1, 2, 5

11 0
 1 ← 1
 2 ← 2
 3 ← 3

5 > 4

↓

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

↑

1, 2, 5

↓

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

11 0

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

1 -1

2 -2

3 -3

2 > 1