$m = 8$ $\quad P = \{1, 2, 5, 6\}$

$n = 4$ $\quad w = \{2, 3, 4, 5\}$

P	w	V	0	1	2	3	4	5	6	7	8
		0	0	0	0	0	0	0	0	0	0
1	2	1	0	0	1	1	1	1	1	1	1
2	3	2	0	0	1	2	2	3	3	3	3
5	4	3	0	0	1	2	5	5	6	7	7
6	5	4	0	0	1	2	5	6	6	7	8

$$V[i, w] = \max\{V[i-1, w], V[i-1, w - w[i]] + P[i]\}$$

The below working is for the last row in the table.

$$V[4, 1] = \max\{V[3, 1], V[3, 1-5] + 6\}$$

$3, -4 = N/A$

$$V[4, 5] = \max\{V[3, 5], V[3, 5-5] + 6\}$$

$V[3, 0] + 6\}$

x_1	x_2	x_3	x_4
0	1	0	1

$8 - 6 = 2$

n = 4, W = 5
(weight, value) = (2,3), (3,4), (4,5), (5,6)

knapsack capacity

	0	1	2	3	4	5
0	0	0	0	0	0	0
1	0					
1,2	0					
1,2,3	0					
1,2,3,4	0					

items

V	W	0	1	2	3	4	5
0	0	0	0	0	0	0	0
3	2	0	0	3	3	3	3
4	3	0	0	3	4	4	7
5	4	0	0	3	4	5	7
6	5	0	0	3	4	5	7

P.T.O

Longest Common Subsequence

$S_1 =$ s t o n e

$S_2 =$ l o n g e s t

		l	o	n	g	e	s	t
	0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0	0
s 1	0	0	0	0	0	0	1	0
t 2	0	0	0	0	0	0	1	2
o 3	0	0	1	1	1	1	1	2
n 4	0	0	1	2	2	2	2	2
e 5	0	0	1	2	2	3	3	3
			o	n		e		

if $(A[i] == B[i])$

$$LCS[i, j] = 1 + LCS[i-1, j-1]$$

else

$$LCS[i, j] = \max(LCS[i-1, j], LCS[i, j-1])$$