Algorithms and Data Structures 2

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Dynamic Programming 1

Manhattan Tourists

5.1

$W_{i,j}$	1	2	3	4	5
1	0	2	9	16	24
2	3	4	18	26	32
3	12	10	24	35	41
4	13	23	29	39	46
5	18	30	34	47	52

5.2

$$W[i,j] = \begin{cases} 0 & \text{for (i, j) = (1, 1)} \\ W[i,j-1] + R[i,j-1] & \text{for } i = 1 \\ W[i-1,j] + D[i-1,j] & \text{for } j = 1 \\ \max(W[i-1,j] + D[i-1,j], W[i,j-1] + R[i,j-1]) & \text{otherwise} \end{cases}$$