CSE 417: Algorithms and Computational Complexity
Recurrence for separating words into lines
(Section 10.5 of the text)

Define cost$[i]$ to be the minimum total penalty for $w_i, w_{i+1}, \ldots, w_n$. Then

$$
\text{cost}[i] = \begin{cases} 0 & \text{, if } w_{i,n} \leq W \\ \min_{\substack{k>i \\ w_{i,k-1} \leq W}} \text{lineCost}(W - w_{i,k-1}) + \text{cost}[k] & \text{, if } w_{i,n} > W \end{cases} .
$$