A lumberjack has an ℓ-yard long log of wood he wants cut at n specific places L_1, L_2, $\ldots L_n$, represented as the distance of that cut point from one end of the log. (We can also consider the ends as trivial "cut points" $L_0 = 0$ and $L_{n+1} = k$.) The sawmill charges $\$x$ to cut a log that is x yards long (regardless of where that cut is). The sawmill also allows the customer to specify the ordering and location of the cuts.
For example, if $\ell = 20$ and we want cuts at 3 yards, 6 yards, and 10 yards from the left end, then if we cut them from left to right the cost would be

$$20 + (20 - 3) + (20 - 6) = 20 + 17 + 14 = 51$$

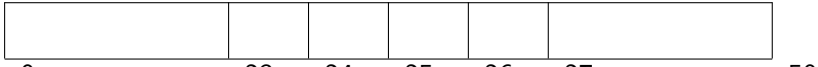
But making the same cuts from right to left would cost

$$20 + 10 + 6 = 36$$

Devise and implement an algorithm to minimize the cost, and analyze its running time.

Don't be greedy:

Let $\ell = 50$ and $L = [0, 23, 24, 25, 26, 27, 50]$



Cutting in half:

$$50 + 25 + 2 + 25 + 2 = 104$$

Trimming edges:

$$50 + 27 + 4 + 3 + 2 = 86$$

For next time:

Read Problem 15-6, the accompanying code framework in the repository (`c15p6j`), and the commentary on Canvas.

Devise a recursive characterization (with appropriate variables).