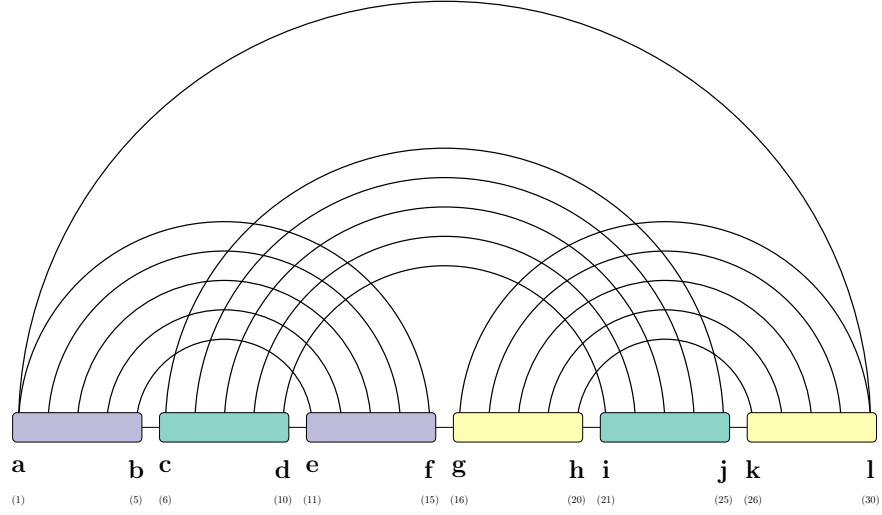


fatgraph name: K



first and last anchors, already given: a, l

$$A[a, l] = \min_{f, h, k} (B[h, f, a, k] + G[l, f, h, k])$$

$$B[a, f, h, k] = \min_i (C[i, f, a, k])$$

$$C[a, f, i, k] = \min_j \left(\boxed{D}[f, a \mid i, j] \right)$$

$$\boxed{D}'[f, a \mid i, j] = \min \begin{cases} \boxed{D}'[f, a-1 \mid i, j], & \text{if } a-1, \notin \{f, i, j\} \\ \boxed{D}[f+1, a-1 \mid i, j] + \Delta G(f, a) & \text{if } \{f+1, a-1\} \cap \{i, j\} = \emptyset \end{cases}$$

$$\boxed{D}[f, a \mid i, j] = \min \begin{cases} \boxed{D}[f+1, a \mid i, j], & \text{if } f+1 \notin \{a, i, j\} \\ \boxed{D}'[f, a-1 \mid i, j], & \text{if } a-1, \notin \{f, i, j\} \\ \boxed{D}[f+1, a-1 \mid i, j] + \Delta G(f, a) & \text{if } \{f+1, a-1\} \cap \{i, j\} = \emptyset, \\ E[i, f, j, a] \end{cases}$$

$$E[b, e, i, j] = \min_c (F[i, e, j, c])$$

$$F[c, e, i, j] = \min_d \left(\boxed{C} \boxtimes [c, d, i, j] \right)$$

$$G[f, h, k, l] = \min_g \left(\boxed{C} \boxtimes [g, h, k, l] \right)$$

