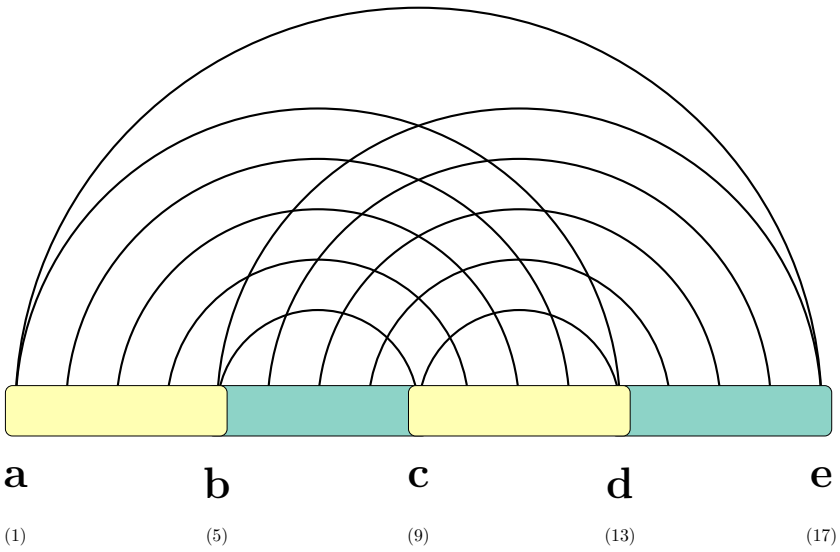
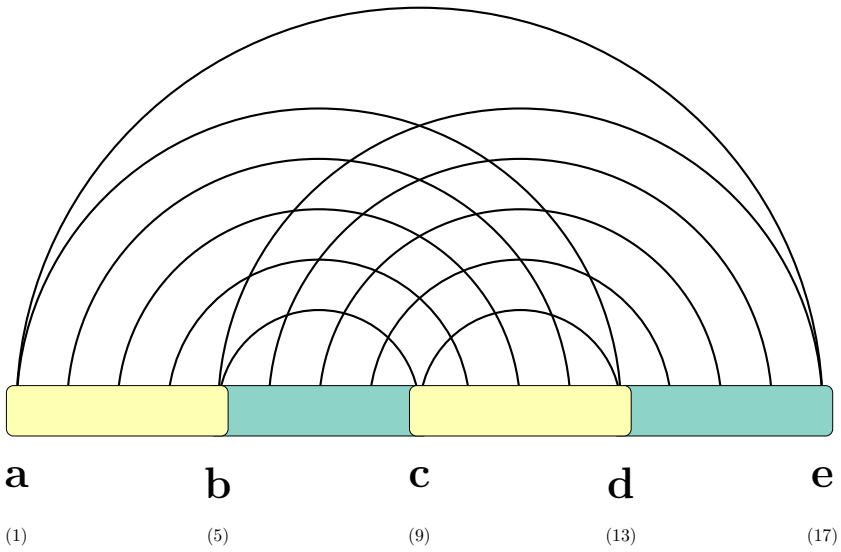
fatgraph name: H



first and last anchors, already given: a, e

$$A = \min_{b,c,d} \Big(C_{\boxtimes}\,[a,b,c,d] + C_{\boxtimes}\,[b,c,d,e] \Big)$$

fatgraph name: H2



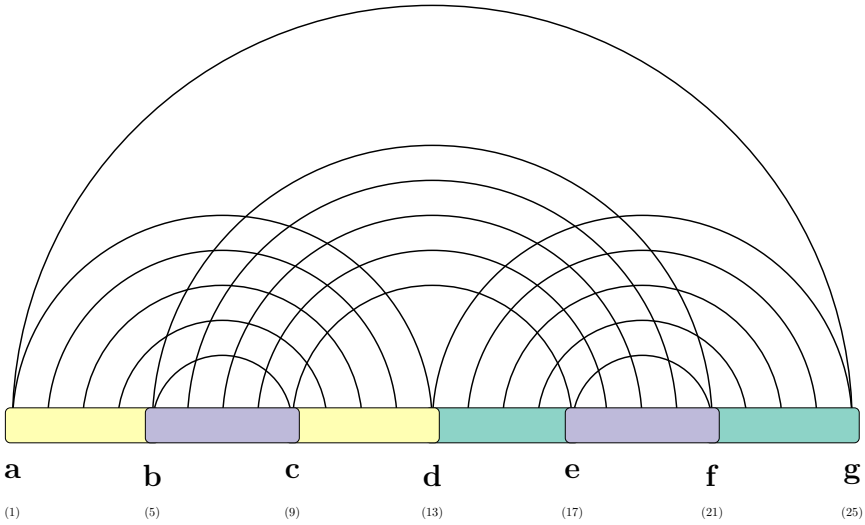
first and last anchors, already given: a, e

$$A = \min_{d} \Big(B\,[a, d \mid d, e] \Big)$$

$$B'\,[a, d \mid d', e] = \min \Big\{ B'[a+1, d \mid d', e], \quad \text{if } a+1 \notin \{d, d', e\}$$

$$B\,[a, d \mid d', e] = \min \begin{cases} B\,[a, d-1 \mid d', e], & \text{if } d-1, \notin \{a, d', e\} \\ B'\,[a+1, d \mid d', e], & \text{if } a+1 \notin \{d, d', e\} \\ B\,[a+1, d-1 \mid d', e] + \Delta G(a, d) & \text{if } \{a+1, d-1\} \cap \{d', e\} = \emptyset, \\ C_{\boxtimes}\,[a, d, d', e] \end{cases}$$

fatgraph name: K



first and last anchors, already given: a, g

$$A = \min_{d} \Big(B\,[d, g \mid d, a] \Big)$$

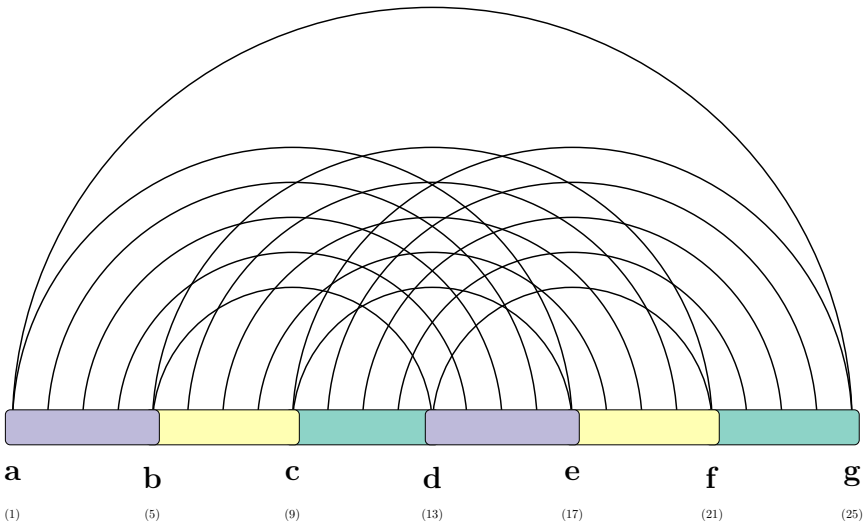
$$B'\,[d, g \mid d', a] = \min \begin{cases} B'\,[d, g-1 \mid d', a], & \text{if } g-1, \notin \{d, d', a\} \\ B\,[d+1, g-1 \mid d', a] + \Delta G(d, g) & \text{if } \{d+1, g-1\} \cap \{d', a\} = \emptyset \end{cases}$$

$$B\,[d, g \mid d', a] = \min \begin{cases} B\,[d+1, g \mid d', a], & \text{if } d+1 \notin \{g, d', a\} \\ B'\,[d, g-1 \mid d', a], & \text{if } g-1, \notin \{d, d', a\} \\ B\,[d+1, g-1 \mid d', a] + \Delta G(d, g) & \text{if } \{d+1, g-1\} \cap \{d', a\} = \emptyset, \\ C\,[d', a \mid g, d] \end{cases}$$

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

$$C\,[d, a \mid f, e] = \min \begin{cases} C\,[d+1, a \mid f, e], & \text{if } d+1 \notin \{a, f, e\} \\ C'\,[d, a-1 \mid f, e], & \text{if } a-1, \notin \{d, f, e\} \\ C\,[d+1, a-1 \mid f, e] + \Delta G(d, a) & \text{if } \{d+1, a-1\} \cap \{f, e\} = \emptyset, \\ C_{\boxtimes}\,[a, d, e, f] \end{cases}$$

fatgraph name: L

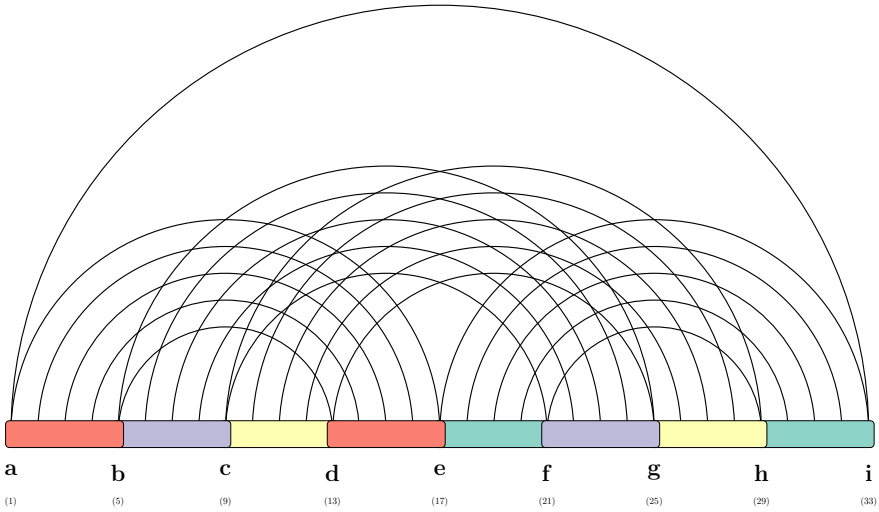


first and last anchors, already given: a, g

$$A = \min_{c,d,f} \Big(B[d, a, c, f] + C_{\boxtimes}\,[c, d, f, g] \Big)$$

$$B\,[a, c, d, f] = \min_{b,e} \Big(C_{\boxtimes}\,[a, b, d, e] + C_{\boxtimes}\,[b, c, e, f] \Big)$$

fatgraph name: M



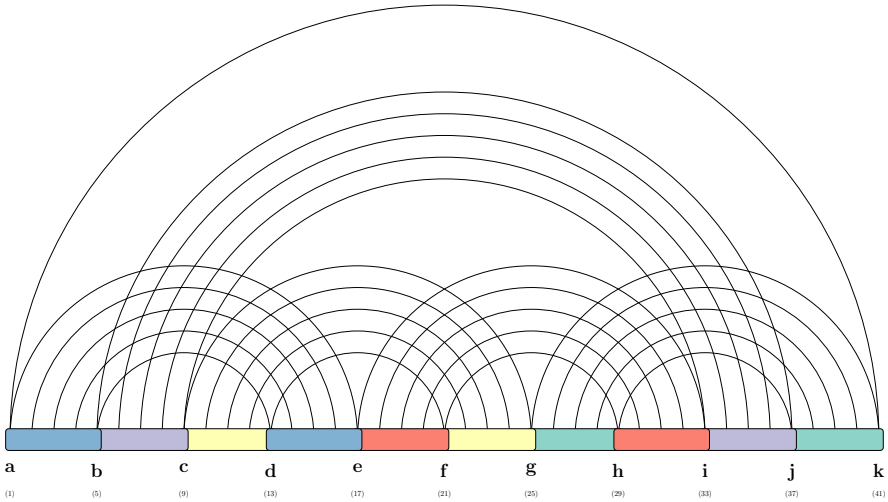
first and last anchors, already given: a, i

$$A = \min_{e,f,h} \Big(C_{\boxtimes}[e,f,h,i] + B[a,h,e,f] \Big)$$

$$B\,[a,e,f,h] = \min_{b,d} \Big(C[b,d,h,f] + C_{\boxtimes}[a,b,d,e] \Big)$$

$$C\,[b,d,f,h] = \min_{c,g} \Big(C_{\boxtimes}[c,d,g,h] + C_{\boxtimes}[b,c,f,g] \Big)$$

fatgraph name: C5



first and last anchors, already given: a, k

$$A = \min_{g,h,j} \Big(B[h,g,j,a] + C_{\boxtimes}[g,h,j,k] \Big)$$

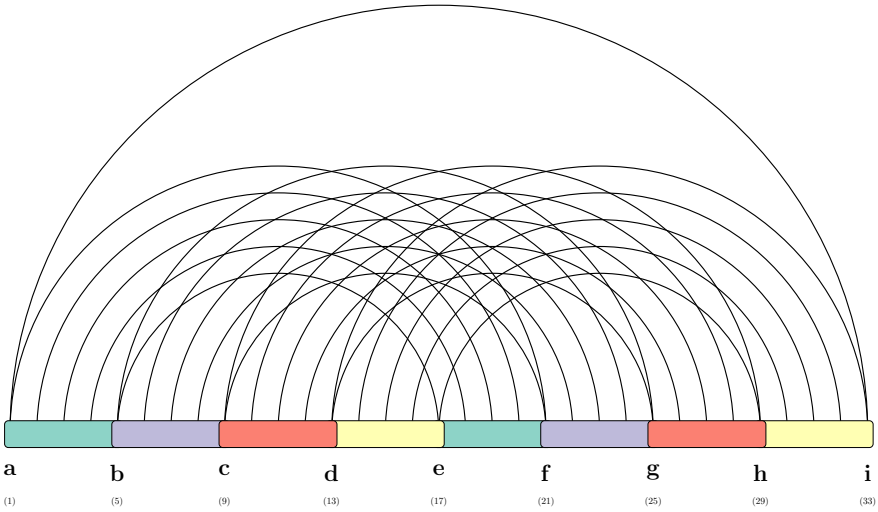
$$B\,[a,g,h,j] = \min_{e,f,i} \Big(C\,[e,a \mid i,g,j,f] + C_{\boxtimes}\,[e,f,h,i] \Big)$$

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

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

$$D\,[b,d,f,g,i,j] = \min_{c} \Big(C_{\boxtimes}\,[c,d,f,g] + C_{\boxtimes}\,[b,c,i,j] \Big)$$

fatgraph name: K4



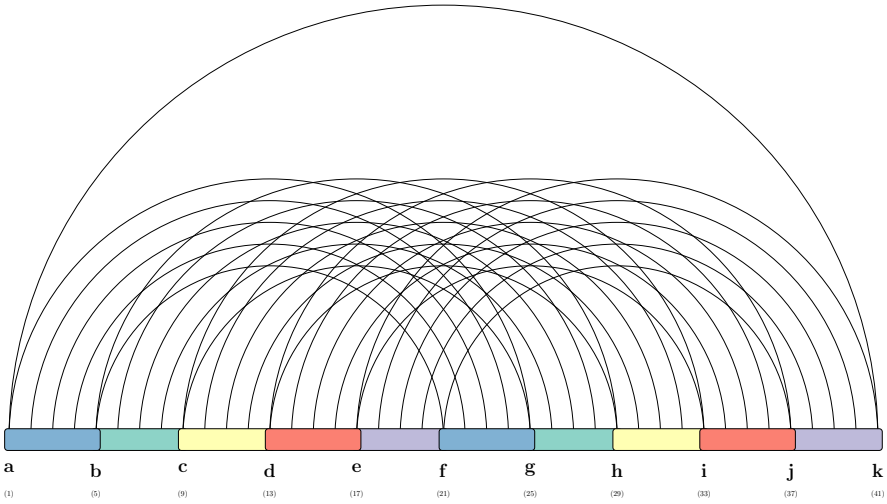
first and last anchors, already given: a, i

$$A = \min_{d,e,h} \left(B[d,h,a,e] + C_{\boxtimes}\,[d,e,h,i] \right)$$

$$B\,[a,d,e,h] = \min_{c,g} \left(C[g,a,c,e] + C_{\boxtimes}\,[c,d,g,h] \right)$$

$$C\,[a,c,e,g] = \min_{b,f} \left(C_{\boxtimes}\,[a,b,e,f] + C_{\boxtimes}\,[b,c,f,g] \right)$$

fatgraph name: K5



first and last anchors, already given: a, k

$$A = \min_{e,f,j} \Big(B[a,e,j,f] + C_{\boxtimes}\,[e,f,j,k] \Big)$$

$$B\,[a,e,f,j] = \min_{d,i} \Big(C[a,d,i,f] + C_{\boxtimes}\,[d,e,i,j] \Big)$$

$$C\,[a,d,f,i] = \min_{b,g} \Big(C_{\boxtimes}\,[a,b,f,g] + D[d,g,i,b] \Big)$$

$$D\,[b,d,g,i] = \min_{c,h} \Big(C_{\boxtimes}\,[b,c,g,h] + C_{\boxtimes}\,[c,d,h,i] \Big)$$