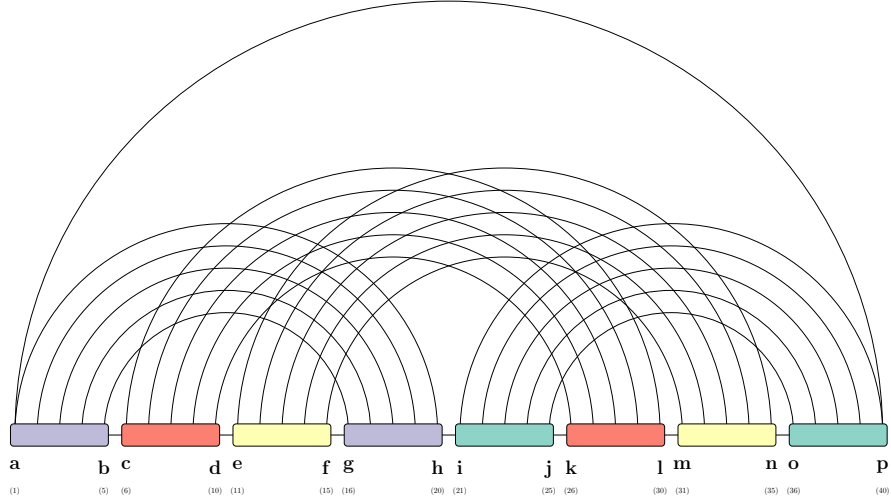


fatgraph name: M



first and last anchors, already given: a, p

$$A = \min_{i,j,n} (B[j, i, a, n] + I[j, i, n, p])$$

$$B[a, i, j, n] = \min_{b,g} (C[j, b, g, n] + H[i, b, g, a])$$

$$C[b, g, j, n] = \min_{c,f} (D[j, c, n, f])$$

$$D[c, f, j, n] = \min_{d,l} (E[j, l, c, d] + F[l, n, f, d])$$

$$E[c, d, j, l] = \min_k \left(C_{\boxtimes} [c, d, k, l] \right)$$

$$F[d, f, l, n] = \min_e (G[e, l, n, f])$$

$$G[e, f, l, n] = \min_m \left(C_{\boxtimes} [e, f, m, n] \right)$$

$$H[a, b, g, i] = \min_h \left(C_{\boxtimes} [a, b, g, h] \right)$$

$$I[i, j, n, p] = \min_o \left(C_{\boxtimes} [i, j, o, p] \right)$$