a (1) b (5) c (9) (41) d (13) e (17) f (21) g (25) h (29) i (33) j (37) k
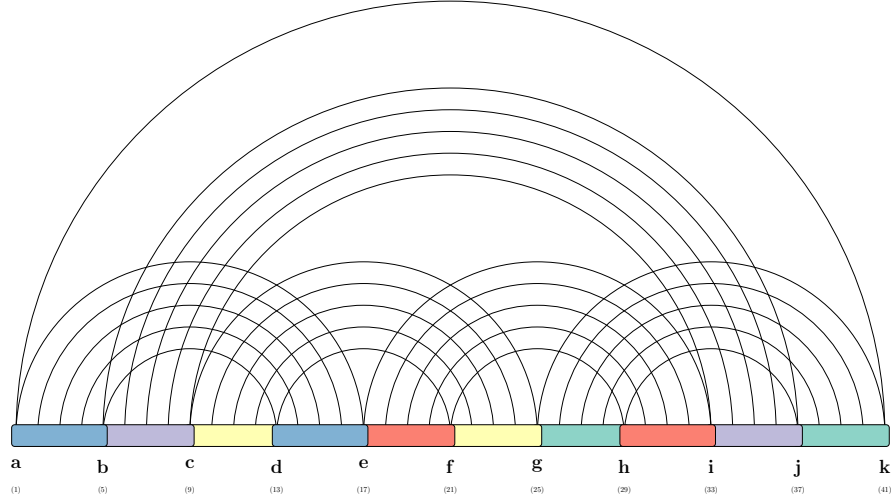
fatgraph name: C5

first and last anchors, already given: a, k

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

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

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

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

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

1

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                    ┌──────────┐
                    │          │
                    └────┬─────┘
                         ▼
               ┌──────────────────┐
               │ 1 25 29 37 41    │
               └──────────────────┘
```

H0 (25-29-37-41) (clique)

26 **41 25**
29 37

26 40 **41**
29 37

26 27 40
29 37

27 40 39
29 37

27 28 39
29 37

38 28 39
29 37

1 17 21 25 29 33 37

H3 (17-21-29-33) (clique)

33 17 18
29 21

33 18 32
29 21

19 18 32
29 21

19 31 32
29 21

19 31 20
29 21

30 31 20
29 21

H4 (1-5-13-17) (diag)

1 2 **17**
33 37 21 25

16 2 **17**
33 37 21 25

16 2 3
33 37 21 25

16 3 15
33 37 21 25

3 4 15
33 37 21 25

4 14 15
33 37 21 25

5 4 14
33 37 21 25

5 13 14
33 37 21 25

13 21 25 33 37 5 9

H1 (9-13-21-25) (clique)

9 10 **25**
13 21

10 24 **25**
13 21

11 24 10
13 21

11 23 24
13 21

11 23 12
13 21

23 12 22
13 21

H2 (5-9-33-37) (clique)

37 6 **5**
33 9

37 36 6
33 9

7 36 6
33 9

7 36 35
33 9

8 7 35
33 9

8 34 35
33 9