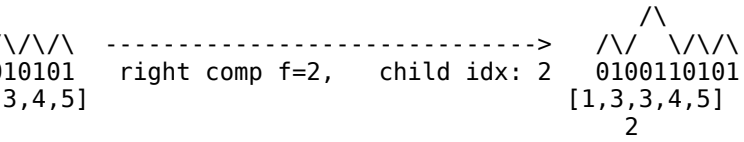
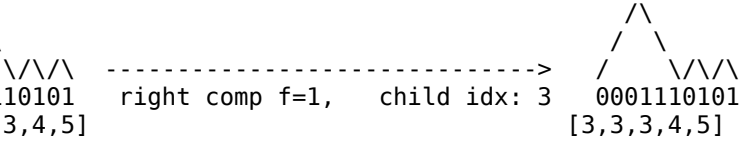
```
0

DONE generate tree T0, current index=0
Node list---------------------------------------------

C(n)=C(1)=1
Idempotent count: 1
-----------------------------------------------------
Index   id      Dyck word       func            idempotent?
-----------------------------------------------------
0       0          0101010101   [1,2,3,4,5]         yes
-----------------------------------------------------
INIT generate tree T4, current index=0
INIT generate tree T3, current index=0
INIT generate tree T2, current index=0
INIT generate tree T1, current index=0
INIT generate tree T0, current index=0


0

DONE generate tree T0, current index=0
Node list---------------------------------------------

C(n)=C(1)=1
Idempotent count: 1
-----------------------------------------------------
Index   id      Dyck word       func            idempotent?
-----------------------------------------------------
0       0          0101010101   [1,2,3,4,5]         yes
-----------------------------------------------------




                                                        /\
                      /\/\/\/\/\  ------------------------------>   /  \/\/\/\
 0,     parent idx: 0   0101010101   right comp f=1,   child idx: 1   0011010101
                      [1,2,3,4,5]                                 [2,2,3,4,5]
                      0                                              1


0———1

DONE generate tree T1, current index=1
Node list---------------------------------------------

C(n)=C(2)=2
```

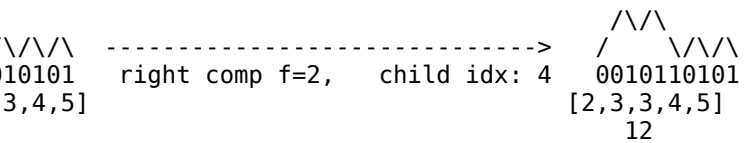
```
Idempotent count: 2
-----------------------------------------------------
Index   id      Dyck word       func            idempotent?
-----------------------------------------------------
0       0          0101010101   [1,2,3,4,5]         yes
1       1          0011010101   [2,2,3,4,5]         yes
-----------------------------------------------------
```



1, parent idx: 0



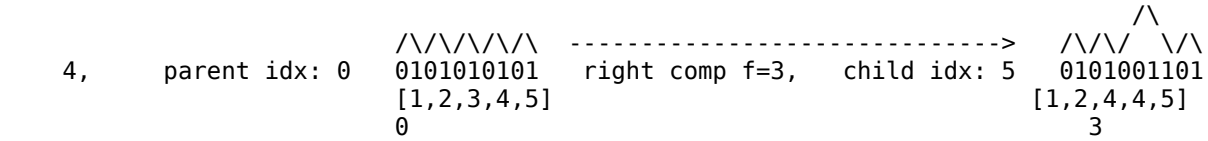
2, parent idx: 2

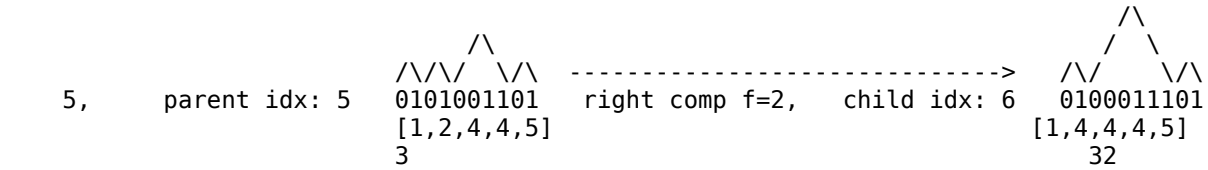


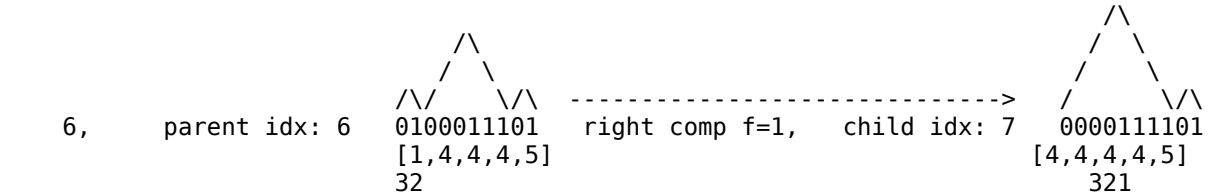
3, parent idx: 1

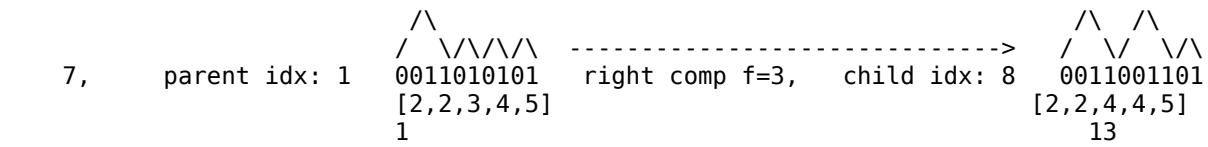

```
DONE generate tree T2, current index=4
Node list---------------------------------------------

C(n)=C(3)=5
Idempotent count: 4
-----------------------------------------------------
Index   id      Dyck word       func            idempotent?
-----------------------------------------------------
0       0          0101010101   [1,2,3,4,5]         yes
1       1          0011010101   [2,2,3,4,5]         yes
2       2          0100110101   [1,3,3,4,5]         yes
```

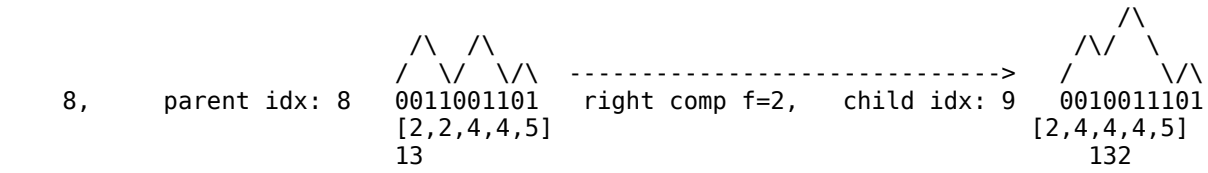
```
3       21         0001110101   [3,3,3,4,5]         yes
4       12         0010110101   [2,3,3,4,5]
-----------------------------------------------------
```

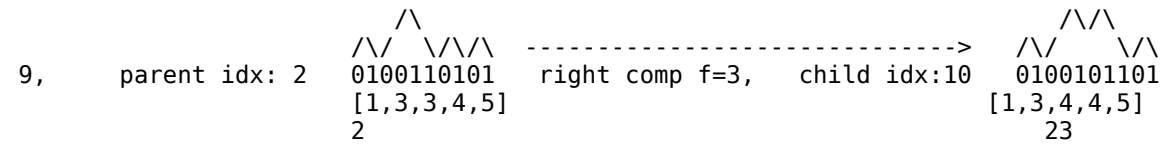


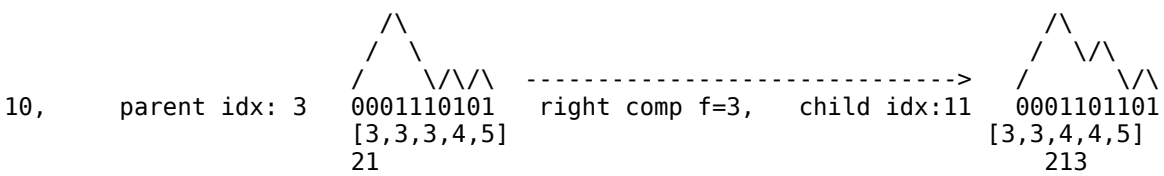


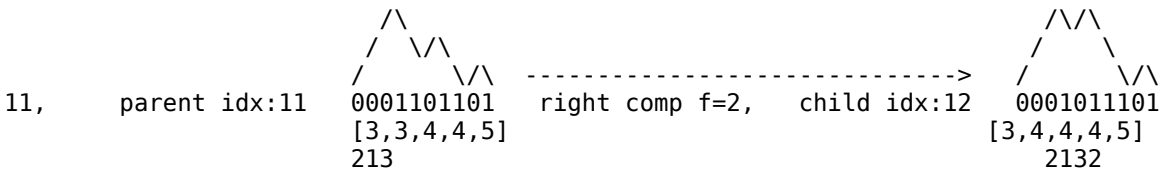


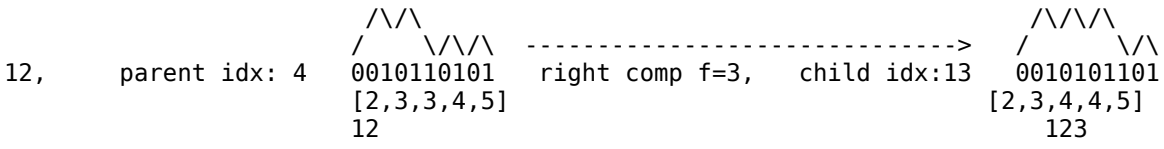


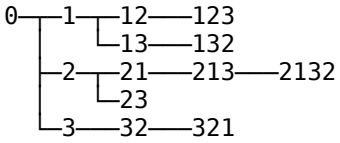






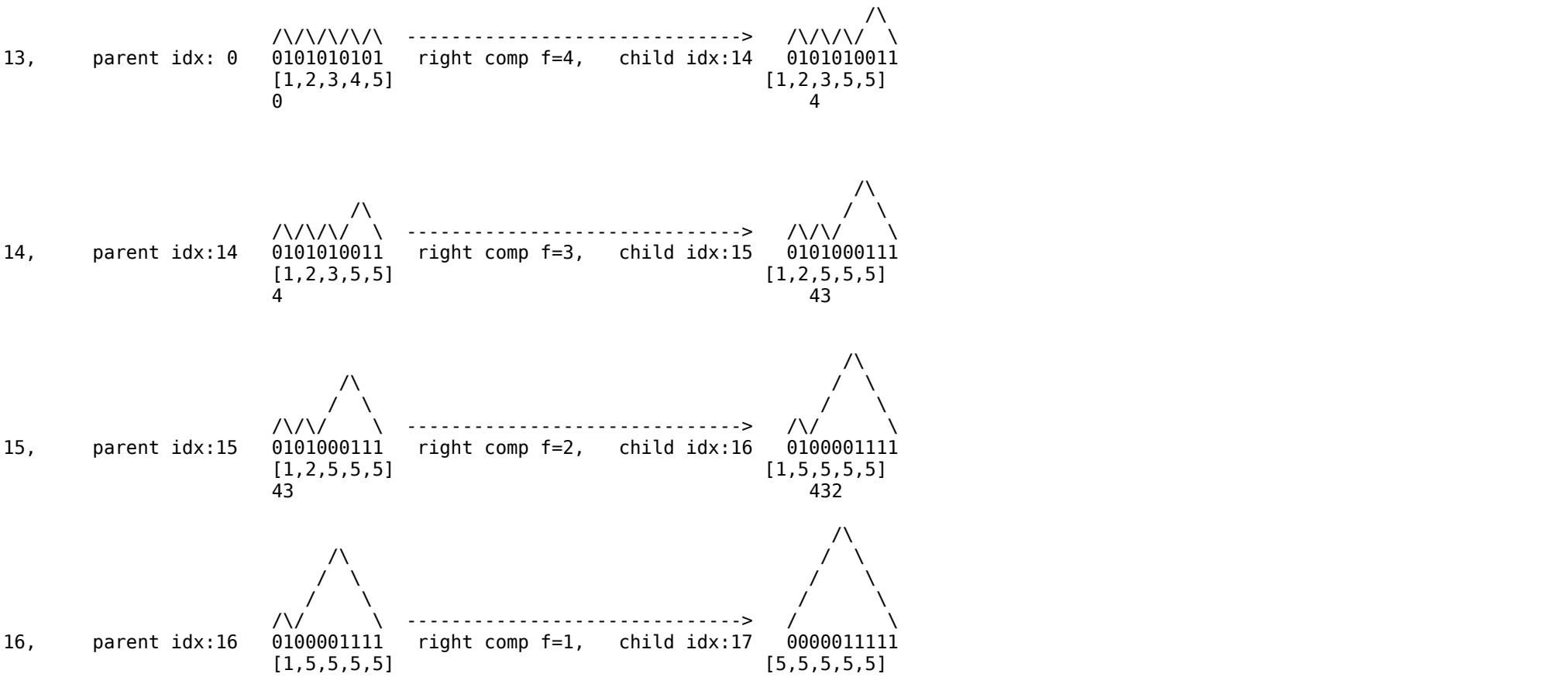


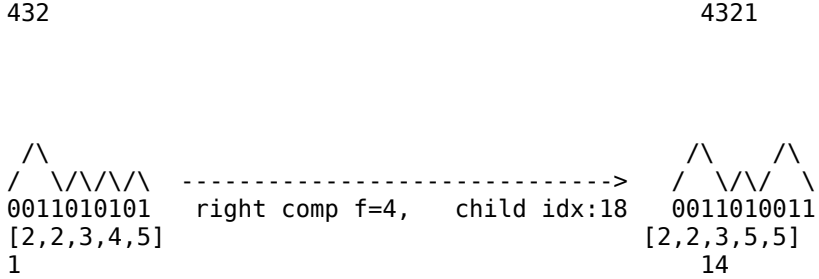




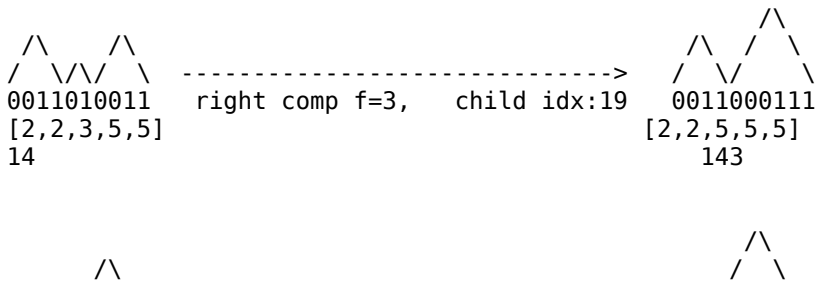

```
DONE generate tree T3, current index=13
Node list---------------------------------------------

C(n)=C(4)=14
Idempotent count: 8
-----------------------------------------------------
Index   id      Dyck word       func            idempotent?
-----------------------------------------------------
```

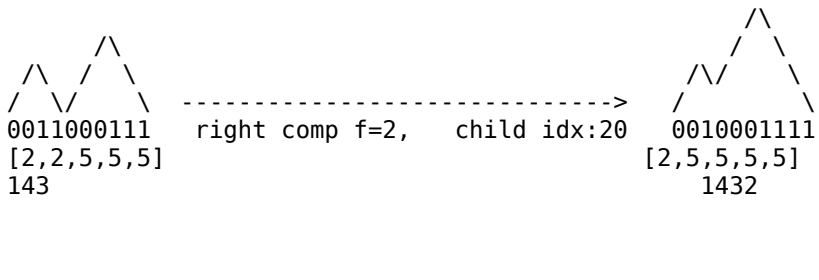
```
0       0          0101010101   [1,2,3,4,5]         yes
1       1          0011010101   [2,2,3,4,5]         yes
2       2          0100110101   [1,3,3,4,5]         yes
3       21         0001110101   [3,3,3,4,5]         yes
4       12         0010110101   [2,3,3,4,5]
5       3          0101001101   [1,2,4,4,5]         yes
6       32         0100011101   [1,4,4,4,5]         yes
7       321        0000111101   [4,4,4,4,5]         yes
8       13         0011001101   [2,2,4,4,5]         yes
9       132        0010011101   [2,4,4,4,5]
10      23         0100101101   [1,3,4,4,5]
11      213        0001101101   [3,3,4,4,5]
12      2132       0001011101   [3,4,4,4,5]
13      123        0010101101   [2,3,4,4,5]
-----------------------------------------------------
```

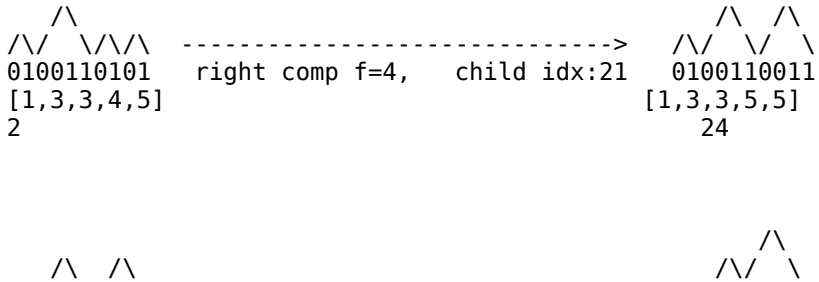


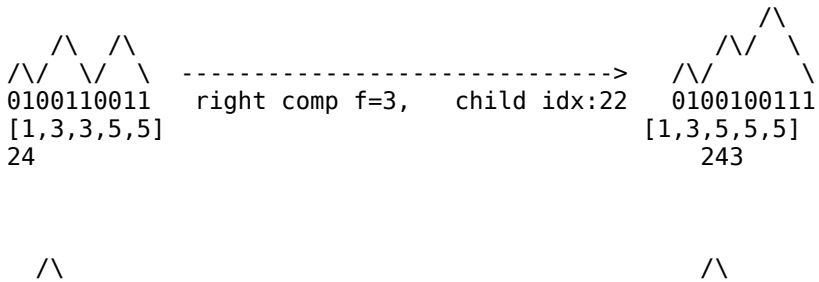


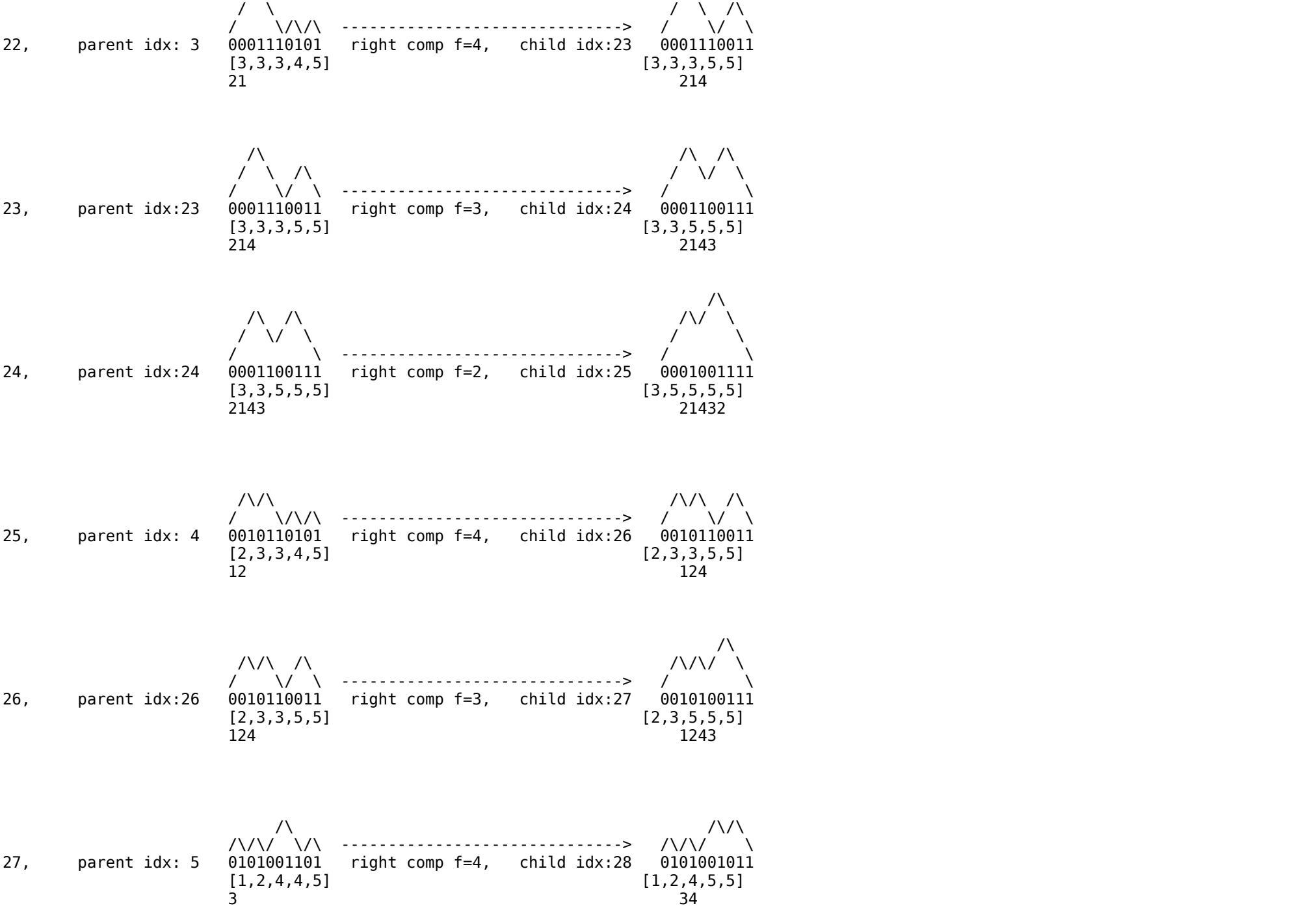
17, parent idx: 1 0011010101 [2,2,3,4,5] 1 right comp f=4, child idx:18 0011010011 [2,2,3,5,5] 14

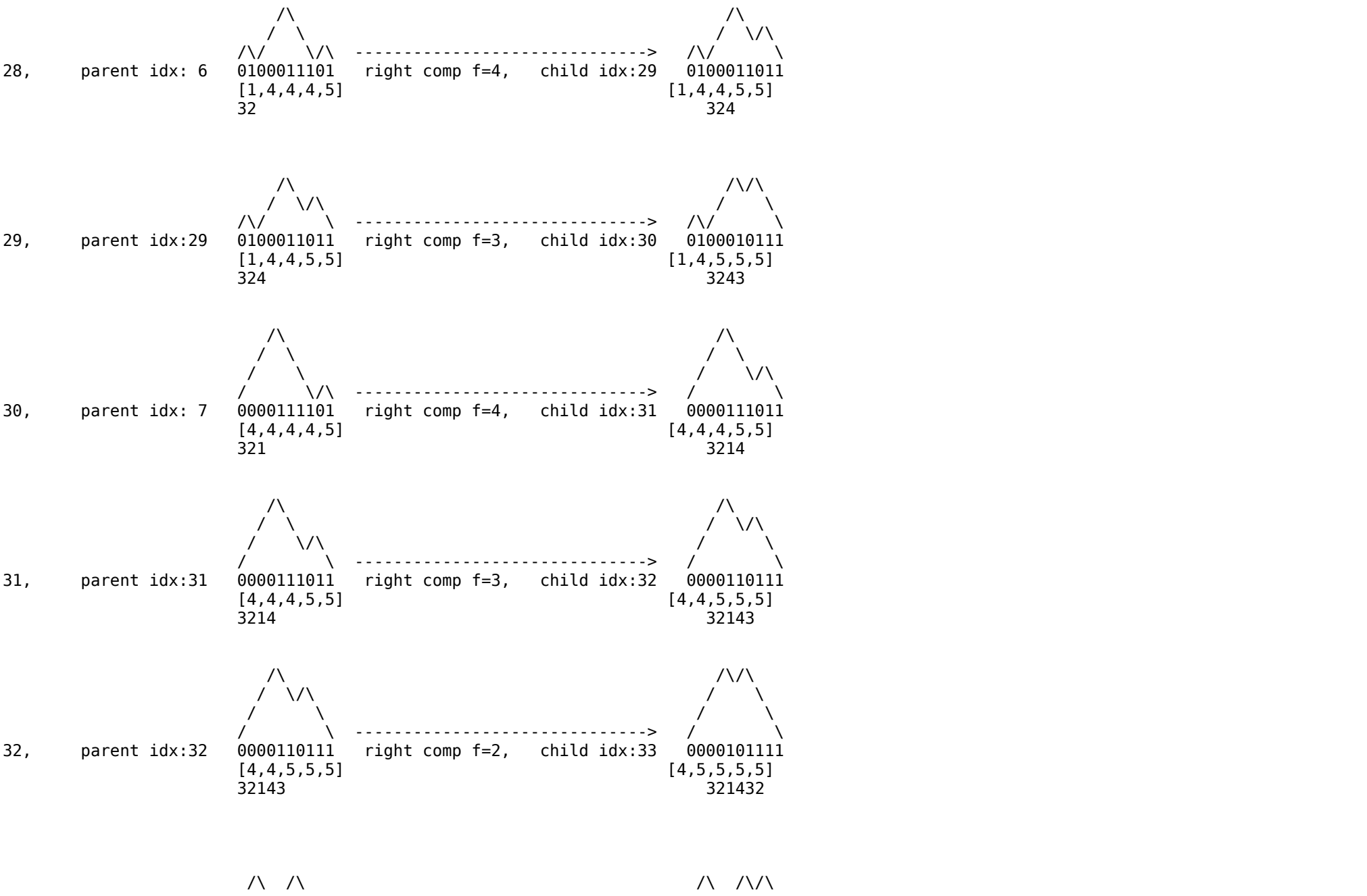


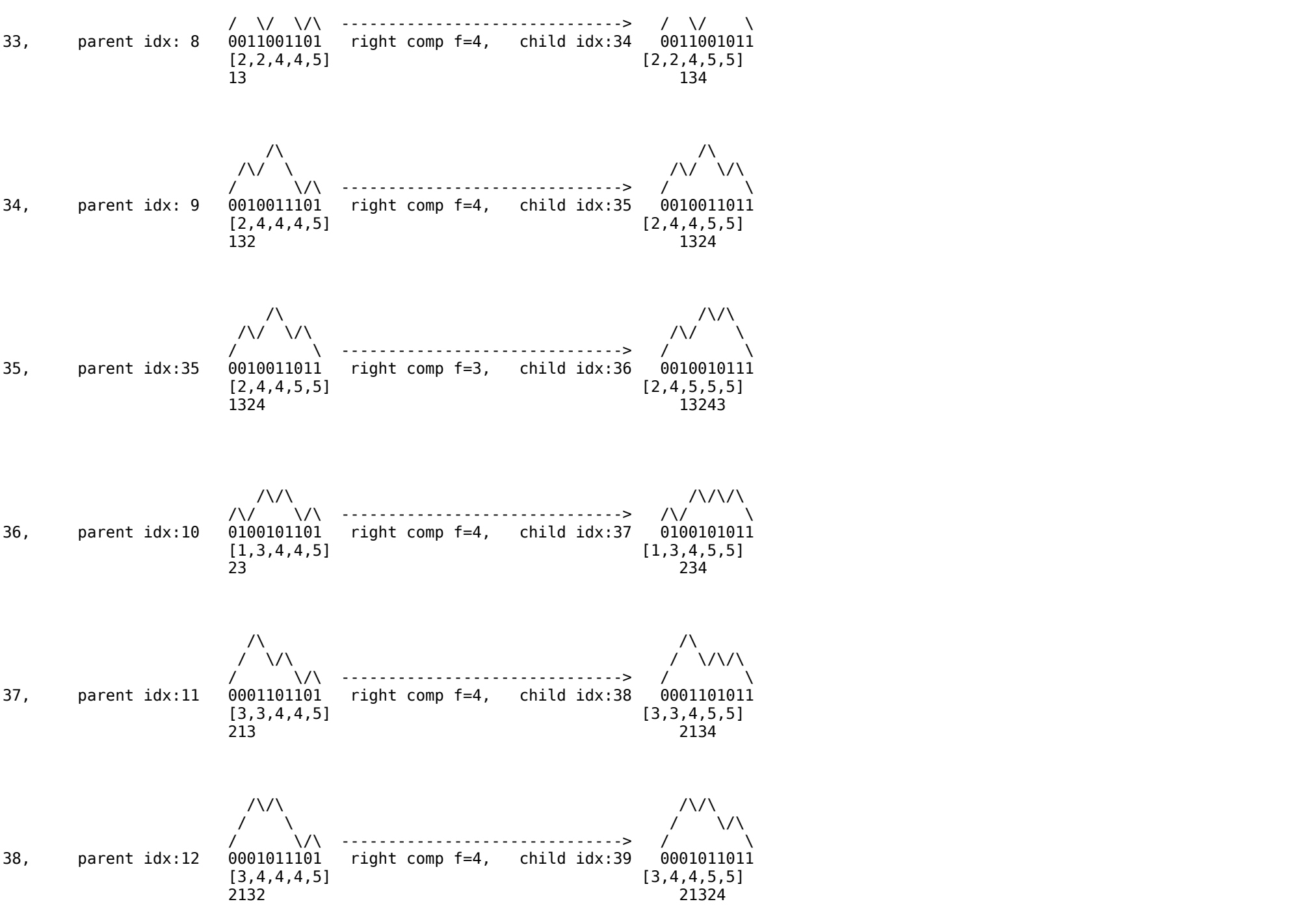


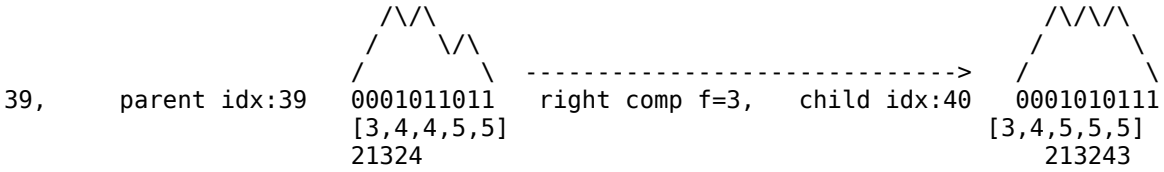


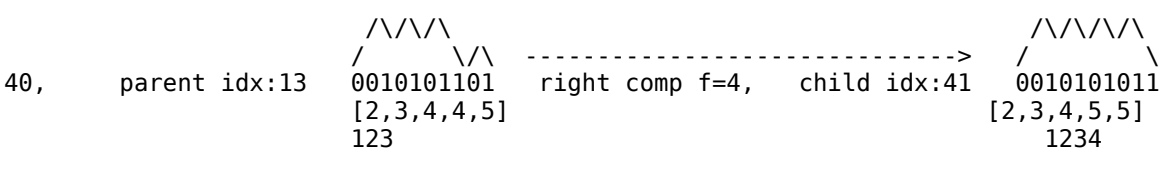


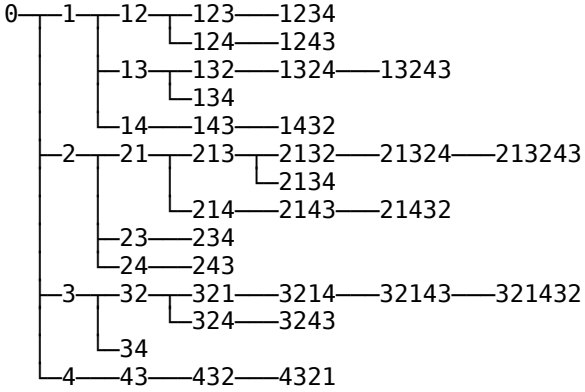

22, parent idx: 3 0001110101 [3,3,3,4,5] 21
right comp f=4, child idx:23
0001110011 [3,3,3,5,5] 214
23, parent idx:23 0001110011 [3,3,3,5,5] 214
right comp f=3, child idx:24
0001100111 [3,3,5,5,5] 2143
24, parent idx:24 0001100111 [3,3,5,5,5] 2143
right comp f=2, child idx:25
0001001111 [3,5,5,5,5] 21432
25, parent idx: 4 0010110101 [2,3,3,4,5] 12
right comp f=4, child idx:26
0010110011 [2,3,3,5,5] 124
26, parent idx:26 0010110011 [2,3,3,5,5] 124
right comp f=3, child idx:27
0010100111 [2,3,5,5,5] 1243
27, parent idx: 5 0101001101 [1,2,4,4,5] 3
right comp f=4, child idx:28
0101001011 [1,2,4,5,5] 34


28, parent idx: 6 0100011101 [1,4,4,4,5] 32
right comp f=4, child idx:29
0100011011 [1,4,4,5,5] 324
29, parent idx:29 0100011011 [1,4,4,5,5] 324
right comp f=3, child idx:30
0100010111 [1,4,5,5,5] 3243
30, parent idx: 7 0000111101 [4,4,4,4,5] 321
right comp f=4, child idx:31
0000111011 [4,4,4,5,5] 3214
31, parent idx:31 0000111011 [4,4,4,5,5] 3214
right comp f=3, child idx:32
0000110111 [4,4,5,5,5] 32143
32, parent idx:32 0000110111 [4,4,5,5,5] 32143
right comp f=2, child idx:33
0000101111 [4,5,5,5,5] 321432


33, parent idx: 8 0011001101 [2,2,4,4,5] 13 right comp f=4, child idx:34 0011001011 [2,2,4,5,5] 134
34, parent idx: 9 0010011101 [2,4,4,4,5] 132 right comp f=4, child idx:35 0010011011 [2,4,4,5,5] 1324
35, parent idx:35 0010011011 [2,4,4,5,5] 1324 right comp f=3, child idx:36 0010010111 [2,4,5,5,5] 13243
36, parent idx:10 0100101101 [1,3,4,4,5] 23 right comp f=4, child idx:37 0100101011 [1,3,4,5,5] 234
37, parent idx:11 0001101101 [3,3,4,4,5] 213 right comp f=4, child idx:38 0001101011 [3,3,4,5,5] 2134
38, parent idx:12 0001011101 [3,4,4,4,5] 2132 right comp f=4, child idx:39 0001011011 [3,4,4,5,5] 21324








```
DONE generate tree T4, current index=41
Node list---------------------------------------------

C(n)=C(5)=42
Idempotent count: 16
-----------------------------------------------------
Index   id      Dyck word       func            idempotent?
-----------------------------------------------------
0       0          0101010101   [1,2,3,4,5]         yes
1       1          0011010101   [2,2,3,4,5]         yes
2       2          0100110101   [1,3,3,4,5]         yes
3       21         0001110101   [3,3,3,4,5]         yes
4       12         0010110101   [2,3,3,4,5]
5       3          0101001101   [1,2,4,4,5]         yes
6       32         0100011101   [1,4,4,4,5]         yes
7       321        0000111101   [4,4,4,4,5]         yes
```

```
8       13          0011001101   [2,2,4,4,5]         yes
9       132         0010011101   [2,4,4,4,5]
10      23          0100101101   [1,3,4,4,5]
11      213         0001101101   [3,3,4,4,5]
12      2132        0001011101   [3,4,4,4,5]
13      123         0010101101   [2,3,4,4,5]
14      4           0101010011   [1,2,3,5,5]         yes
15      43          0101000111   [1,2,5,5,5]         yes
16      432         0100001111   [1,5,5,5,5]         yes
17      4321        0000011111   [5,5,5,5,5]         yes
18      14          0011010011   [2,2,3,5,5]         yes
19      143         0011000111   [2,2,5,5,5]         yes
20      1432        0010001111   [2,5,5,5,5]
21      24          0100110011   [1,3,3,5,5]         yes
22      243         0100100111   [1,3,5,5,5]
23      214         0001110011   [3,3,3,5,5]         yes
24      2143        0001100111   [3,3,5,5,5]
25      21432       0001001111   [3,5,5,5,5]
26      124         0010110011   [2,3,3,5,5]
27      1243        0010100111   [2,3,5,5,5]
28      34          0101001011   [1,2,4,5,5]
29      324         0100011011   [1,4,4,5,5]
30      3243        0100010111   [1,4,5,5,5]
31      3214        0000111011   [4,4,4,5,5]
32      32143       0000110111   [4,4,5,5,5]
33      321432      0000101111   [4,5,5,5,5]
34      134         0011001011   [2,2,4,5,5]
35      1324        0010011011   [2,4,4,5,5]
36      13243       0010010111   [2,4,5,5,5]
37      234         0100101011   [1,3,4,5,5]
38      2134        0001101011   [3,3,4,5,5]
39      21324       0001011011   [3,4,4,5,5]
40      213243      0001010111   [3,4,5,5,5]
41      1234        0010101011   [2,3,4,5,5]
-----------------------------------------------------


Press enter to finish...
```