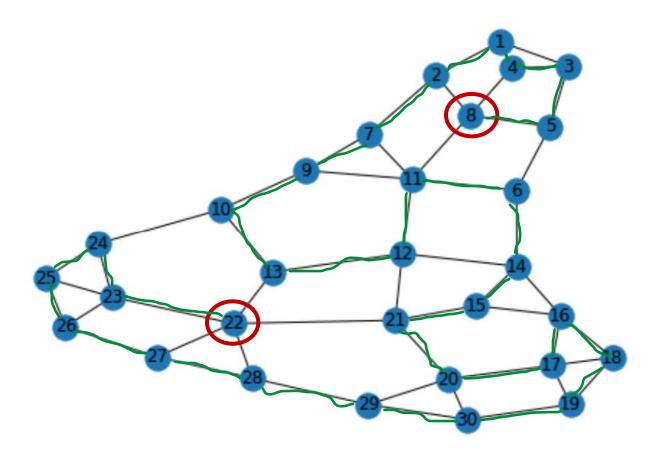
TID - Region A:



Hubs: node 8, node 22

Number of all paths between these two hubs: 64863

Number of all spanning trees between these two hubs: 86

Sorted Trees based on distance:

```
3, 2,
12, 1,
4,
                                                                                           21,
                                                                                                  20,
                                                                                                                16,
                                                                                                                       18,
                                                        4, 3, 5, 6,
12, 11, 6,
4, 3, 5, 6,
4, 3, 5, 6,
                             10,
                                                                                    15,
                                                                                                                                                         27,
                                                                             14,
14,
                                                                                           21,
                                                                                                  20,
                                                                                                               16,
                                                                                                                       18,
                                                                                                                              19,
                                                                                                                                     30,
                                                                                                                                            29,
                                                                                                                                                   28,
                                                                                                                                                                26,
                                                                                                                                                                       25,
                                                                                                                                                                              24,
                      13,
, 1,
                                              2,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1170.0.
                                                                                                                                     30,
                                                                                                                                                                              24,
                                             10,
2,
                                                                                                                       18,
                                                                                                                                                   28,
                                                                                                                                                         27,
                                                                                                                                                                                                       1190.0
                                                                                                                17,
                                                                                                                              19,
                                                                                                                                            29,
                                                                                                                                                                26,
                                                                                                         20,
                                                                             14,
                                                                                                         20,
                                                                                                                       18,
                                                                                                                                     30,
                                                                                                                                            29,
                                                                                                                                                   28,
                                                                                                                                                         27,
                                                                                                                                                                26,
                                                                                                                                                                              24,
                                                                                                                                                                                     23,
                                                                                                                                                                                                       1235.0,
                                                                              15,
                                                                                           18,
                                                                                                                20,
                                                                                                                       30,
                                                                                                                                     28,
                                                                                                                                                         25,
                                                                                                                                                                        24,
                                                                                                                                                                              10,
                                              5, 6,
7, 9,
7, 9,
                                                        14, 12, 21, 15,
                                                                                           18, 17,
                                                                                                                                    28, 27,
                                                                                                         19,
                                                                                                                30,
                                                                                                                       20,
                                                                                                                                                   26, 25,
                                                                                                                                                                23,
                                 6,
1,
4
                 4,
5,
7
                       3, 3,
             1, 6,
                                                   9,
                                                                                    15,
                                                                                                                                           29,
                                                                                                                                                         27,
                                                                      12,
                                                                                           21,
                                                                                                  20,
                                                                                                               16,
                                                                                                                              19,
                                                                                                                                     30,
                                                        10, 13,
                                                                             14,
                                                                                                                       18,
                                                                                                                                                  28,
                                                                                                                                                                26,
                                                                                                                                                                              24,
                                                                                                                                                                                     23,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1255.0,
                                                                                                                                                         27,
'[8,
                                                                                    15,
                                                                                                                      18,
                                                                                                                                    30, 29,
                                                                                                                                                                26,
                                                        10, 13, 12,
                                                                             14,
                                                                                           21, 20, 17,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1255.0.
                                                                      16,
                                                                                    19,
                                                                                                               29,
17,
                                                                                                                                                                10,
'[8,
                                                                                                  20,
                                                                                                                       28,
                                                                                                                                    26,
                                                                                                                                                         24,
                                                                                                                                                                                            22]
                                                                                                                                           25,
                                                                                                                                                                                                       1280.0
 '[8,
                                                                                                                                                                                                       1285.0,
                                                         10,
                                                                13,
                                                                             14,
                                                                                                         20,
                                                                                                                       18,
                                                                                                                                     30,
                                                                                                                                                   28,
                                                                                                                                                         27,
                                                                                                                                                                              24,
                                                                                                                                                                                            22]
                                 6,
1,
             1,
, 6,
                                              7,
7,
7,
5,
7,
                                                                                           14, 16,
                                                                                                                              20,
                                                                                                                                     30, 29,
                                                                                                                                                   28, 27,
                                                                                                                                                                26,
                                                                                                                                                                              24,
                                                                             14,
                                                                                                                                                         27,
 '[8,
                    3,
3, 3,
7, 2, 1
3, 5,
3, 4,
2, 1
                                                         10,
                                                                      12,
                                                                                           15,
                                                                                                  21,
                                                                                                         20,
                                                                                                                       18,
                                                                                                                              19,
                                                                                                                                     30,
                                                                                                                                                   28,
                                                                                                                                                                26,
                                                                                                                                                                        25,
                                                                                                                                                                              24,
                                                                                                                                                                                     23,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1285.0.
                                                                                                               19,
'[8,
                                    1,
4,
                                         2,
3,
                                                   9,
                                                                             21,
                                                                                                                                                  28, 27,
               6,
9,
                                                                                                  16, 18,
                                                                                                                              20, 30, 29,
                                                                                                                                                                26,
                                                                                                                                                                              24,
                                                        10, 13, 12,
                                                                                    15, 14,
                                                                                                                                                                                     23,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1285.0,
                                                                      16,
                                                                             18,
21,
21,
                                                                                           19,
14,
                                                                                                  30,
                                                                                                         20,
                                                                                                               29,
17,
17,
                                                                                                                       28,
19,
                                                                                                                                    26,
                                                                                                                                           25,
                                                                                                                                                  23,
                                                                                                                                                                10,
                                                                                                                                                                       13,
                                                                                                                                                                              12,
        11,
2,
'[8,
                                                                                                                                                         24,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1285.0
                                 6,
1,
                  4,
5,
'[8,
                                                                                                                                                                       25,
25,
                                                                      12,
12,
                                                               13,
                                                                                                         18,
                                                                                                                                                         27,
                                                                                                                                                                26,
                                                                                                                                                                                                       1290.0,
                                                        10,
                                                                                                  16,
                                                                                                                              30,
                                                                                                                                    20,
                                                                                                                                           29,
                                                                                                                                                   28,
                                                                                                                                                                              24,
                                                                                                                                                                                     23,
                                                                                                                                                                                            22]
'[8,
                                                                                                                       19,
                                                                                                                                                   28,
                                                         10,
                                                                                           14,
                                                                                                                              30,
                                                                                                                                     20,
                                                                                                                                                                              24,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1290.0.
 '[8,
                         2,
2,
2,
2,
2,
                                              5,
                                                         14,
                                                                12,
                                                                      21,
                                                                                     16,
                                                                                           18,
                                                                                                  19,
                                                                                                                20,
                                                                                                                       30,
                                                                                                                              29,
                                                                                                                                    28,
                                                                                                                                                   26,
                                                                                                                                                         23,
                                                                                                                                                                25,
                                                                                                                                                                        24,
                                                                                                                                                                              10,
                                                                                                                                                                                            22]
                                                   6,
                                                                      21, 15,
                                                                                    16,
24,
                                                                                           18, 17,
                                                                                                                30,
                                                                                                                              29, 28, 27,
 '[8,
               9,
                              1,
1,
1,
                                                        14, 12,
                                                                                                                                                   26, 23,
                                         3,
3,
3,
                                                                                                                       20,
                                                                                                                                                                       24,
                                                                                                                                                                                     13,
                                                                                                                                                                                            22]
                                 4,
4,
4,
3,
9,
                                                   6,
                                                                             10,
                                                                                                                                           30,
               9,
                                                                      13,
                                                                                           23,
17,
                                                                                                  25,
                                                                                                               27,
30,
                                                                                                                       28,
                                                                                                                              29,
                                                                                                                                    20,
                                                                                                                                                         18,
                                                                                                                                                                17,
'[8,
'[8,
                                                                                                         26,
                                                                                                                                                  19,
                                                                                                                                                                       16,
                                                                                                                                                                                     21,
                                                        14, 12,
                                                                                                                                                                              15,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1310.0,
                                                                      21,
                                                                                    16,
                                                                             15,
                                                                                                                              29,
29,
                                                                                                                                                                23,
17,
                                                                                                                       20,
                                                                                                                                    28, 27,
                                                                                                                                                                       24,
                                                                                                                                                                              10,
                                                        14, 12,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1320.0.
                                        3,
'[8,
                                                                             10,
                                                                                     24,
                                                                                                                                                  19,
                                                                                                                                                         18,
                                                                                                                       28,
         11,
                     2, 1, 1, 2, 2, 1, 2, 1, 5, 3, 4, 5
                                                                                                                                                                                            22]
                                                                                                         26,
                                                                                                                                    20,
                                                                                                                                                                                                       1325.0
                                 7,
7,
4,
 '[8,
                   4,
                                                         14,
                                                                12,
                                                                      21,
                                                                             15,
                                                                                                                20,
                                                                                                                       30,
                                                                                                                                     28,
                                                                                                                                                         25,
                                                                                                                                                                23,
                                                                                                                                                                        24,
                                                                                                                                                                              10,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1330.0,
             3, 9,
                                       9,
3,
                                 15,
'[8,
                                                                                    16,
19,
17,
                                                                                                                30,
                                                                                                                                                                       24,
                                             11, 6, 14, 12, 21,
                                                                                           18, 17,
                                                                                                                       20,
                                                                                                                              29, 28, 27, 26, 25,
                                                                                                                                                                23,
                                                                                                                              27,
27,
27,
 '[8,
                                                                                                                                    26, 23,
                                                                                                                                                   25, 24,
                                                                                                                                                                10,
                                                                                                                                                                              12,
                                                                                                                                                                                     21,
                                                                                                                                                                                            22]
 '[8,
               9,
9,
                                                                                                                                                  25, 24,
                                                                                                                                                                              12,
                                                                                                                                                                                     21,
                                                                                                                                                                10,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1340.0,
                                                                                                                                                  23, 24,
'[8,
                                                                                                                                                                10,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1365.0
                  4,
5,
                                                                                                                       '[8,
                                                                                                                                                                26,
                                                                                                                                                                       25,
                                                                                                                                                                              24,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1370.0.
                                                                                                                                                                26,
                                                                                                                                                                              24,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1370.0,
 '[8,
                                                                                                                                                                              12,
            3,
9,
                       1, 2,
                            2,
1,
'[8,
                                                                                                                                                                10,
                                                                                                                                                                                     21,
                                                                                                                                                                                            22]
                                                                                                                              29,
                                                                                                                                                                              10,
                                                                                                                                                                       24,
 '[8,
                                                                                                                                    28, 27,
                                                                                                                                                                25,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1375.0.
                                 7,
7,
7,
4,
'[8,
                        1, 2,
1, 2,
                                                                                                                                    26, 25, 23, 24,
                                                                                                                                                                10,
                                                                                                                                                                       13,
                                                                                                                                                                                                      1380.0.
                                                                                                                                                                                            22]
'[8,
                                                                                                                              29,
                                                                                                                                    28, 27,
                                                                                                                                                   26, 23,
                                                                                                                                                                       24,
                                                                                                                                                                                                  ': 1385.0,
                                                                                                                                                                              10,
                                                                                                                                                                                            221
                      1,
1,
2,
5,
2
 '[8,
                           2, 7, 9, 11, 6, 14, 12, 21, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 23, 25, 21, 14, 3, 5, 6, 14, 12, 13, 10, 24, 23, 25, 26, 27, 28, 29, 20, 30, 19, 17, 18, 5, 6, 14, 16, 15, 21, 20, 17, 18, 19, 30, 29, 28, 27, 26, 25, 23, 24, 10, 9, 7, 2, 7, 9, 11, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 20, 30, 19, 17, 18, 2, 7, 9, 11, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 20, 30, 19, 17, 18, 2, 7, 9, 11, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 20, 30, 19, 17, 18, 2, 7, 9, 11, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 20, 30, 19, 18, 17, 1, 1, 4, 3, 5, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 20, 30, 19, 18, 17, 1, 1, 4, 3, 5, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 30, 20, 17, 19, 18, 17, 1, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 5, 6, 14, 15, 21, 20, 17, 16, 18, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 18, 19, 17, 20, 30, 29, 28, 27, 26, 23, 25, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 2, 7, 9, 11, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 30, 20, 17, 19, 18, 1, 1, 4, 3, 5, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 30, 20, 17, 19, 18, 2, 1, 4, 3, 5, 6, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 2, 7, 9, 11, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 30, 20, 17, 19, 18, 5, 6, 14, 16, 15, 21, 20, 17, 18, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 2, 7, 9, 11, 6, 14, 15, 16, 18, 17, 19, 30, 20, 29, 20, 21, 12, 13, 10, 24, 23, 25, 24, 20, 20, 20, 20, 21, 21, 21, 20, 20, 20, 21
                                                                                                                                                                              10,
                                                                                                                              29,
                                                                                                                                    28, 27,
                                                                                                                                                   26, 23,
                                                                                                                                                                25,
                                                                                                                                                                        24,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1390.0,
'[8,
             1, 4,
3, 4,
                                                                                                                                                                       11,
                                                                                                                                                                              12,
                                                                                                                                                                                     13,
 '[8,
              4, 1, 2, 4, 1, 2, 2, 1
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1405.0,
'[8,
                                                                                                                                                                                                       1405.0.
                                                                                                                                                                                            221
                                                                                                                                                                       16,
'[8,
             3,
                                                                                                                                                                              10,
'[8,
                                                                                                                                                                       24,
                                                                                                                                                                                            22]
'[8,
                                                                                                                                                                       16,
                                                                                                                                                                                                       1420.0.
'[8,
                                                                                                                                                                                            22]
                                                                                                                                                                       16,
                                                                                                                                                                                     21,
                                                                                                                                                                                                       1420.0
                        2, 1,
3, 5, 6,
7,
 '[8,
                                                                                                                                                                              12,
                                                                                                                                                                                     21,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1420.0,
'[8,
        5,
5,
  [8,
                                                                                                                                                                       13,
                                                                                                                                                                              12,
                                                                                                                                                                                     21,
                                                                                                                                                                                            22]
                4,
4,
7,
3,
                      1,
1,
2,
5,
2
            3,
9,
'[8,
                                                                                                                                                                              12,
                                                                                                                                                                                                       1435.0,
                                                                                                                                                                                            22]
                                                                                                                                                                              15,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1435.0
  [8,
                         5,
2,
2, 7
1, 4
7,
4,
7, 9,
                                                                                                                                                                                                       1460.0,
'[8,
                      1, 2,
1, 2,
1, 2, 7,
2, 1, 4
2, 7,
2, 7, 9,
7, 9,
4, 3,
5, 11
                             6,
7, 9,
7, 9, 11,
1, 4, 3, 5, 6
7, 9, 11, 6
4, 3, 5,
11,
                                                                                                                                                                       11,
                                                                                                                                                                              12,
                                                                                                                                                                                     13,
                                                                                                                                                                                            22]
'[8,
           3,
3,
9,
4,
7,
1,
                4,
4,
7,
1,
2,
                                                                                                                                                                                                       1460.0,
                                                                                                                                                                       24,
  [8,
                                                                                                                                                                              10,
                                                                                                                                                                                            22]
                                                                     16,
                                                                            18, 17, 19, 30, 29, 10, 24, 23, 25, 26, 18, 17, 19, 30, 29,
                                                   6, 14, 15,
                                                                                                                                                                25,
'[8,
                                                                                                               20,
                                                                                                                                                  24,
                                                                                                                                                                                     28,
                                                                                                                                                                                            22]
                                                                                                                             29,
  8,
                                                                      13,
                                                                                                               27,
                                                                                                                                           30,
                                                                                                                                                  19,
                                                                                                                                                         17,
                                                                                                                                                                             15,
                                                   6, 14,
                                                                                                                      28,
                                                                                                                                                                18,
                                                                                                                                                                                     21,
                                                               12,
                                                                                                                                    20,
                                                                                                                                                                                            221
                                                                                                                                                                                                       1490.0.
       11,
                                                        14,
                                                                                                                                                         25,
17,
'[8,
                         , 1
, 2,
, 2,
, 7
2, 7
1, 4
5, 6,
, 7,
1, 1,
                                                                                                                                    13,
                                                                                                                                                  24,
                                                                                                                                                                23,
                                                                                                                                                                                            22]
                                                                                                                                                                                                      1490.0,
                                                                                                                20,
                                                                                                                                                                       26,
                                                                                                                                                                                     28,
                                                        14,
                                                                                                                27,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1505.0,
'[8,
                                                                             10,
                                                                                                                              29,
                                                                                                                                    20,
                                                                                                                                            30,
                                                                                                                                                                18,
                                                                                                                                                                       16,
                                                                                                                                                                                     21,
  [8,
                                                   6, 14,
                                                                      13,
                                                                             10,
                                                                                    24,
                                                                                                  25, 26,
                                                                                                                27,
                                                                                                                       28, 29,
                                                                                                                                    30,
                                                                                                                                           20,
                                                                                                                                                         19,
                                                                                                                                                                18,
                                                                                                                                                                       16,
                                                                                                                                                                              15,
                                                                                                                                                                                     21,
                                                                                                                                                                                                       1515.0,
           3, 4,
3, 4,
9, 7,
4, 3,
4, 1
                      1, 2
1, 2,
2, 1
5,
2, 7
4, 1
                                                                                                                      28, 27,
'[8,
                                                   6, 14, 15,
                                                                                    18, 19, 30, 20,
                                                                                                                                                         24,
                                                                                                                                    26, 23,
                                                                                                                                                                10,
                                                                                                                                                                       13, 12,
                                                                                                                                                                                     21,
                                                                                                                                                                                            22]
                                      9, 11,
9, 11,
, 3, 5,
11, 7,
                                                  6, 14,
6, 14,
                                                               12,
                                                                                                                             29,
                                                                                                                                                         19,
  8,
                                                                      13,
                                                                             10,
17,
                                                                                    24,
18,
                                                                                           25,
                                                                                                                      28,
                                                                                                                                    30,
13,
                                                                                                                                           20,
                                                                                                                                                                18,
                                                                                                                                                                              15,
                                                                                                                                                                                     21,
                                                                                                                                                                                            22
                                                                                                                                                                                                       1530.0,
                                                                                           19,
'[8,
                                                                      16,
23,
                                                                                                                                                  24,
                                                                                                                                                         23,
14,
                                                                                                                                                                                            22]
22]
                                                                                                                                                                                                      1555.0,
                                                                                                  30, 29,
                                                                                                               20,
                                                                                                                                           10,
                                                                                                                                                                                     28,
            1,
3,
6,
                                                        10,
                                                                                                                              19,
                                                                                                               20,
                                                               24,
                                                                                                  28,
                                                                                                         29,
                                                                                                                       30,
                                                                                                                                                                15,
                                                                                                                                                                              12,
                                                                                                                                                                                                  ': 1570.0,
'[8,
                                   11, 9, 11, 1, 2, 7, 9
1, 3, 5, 6
                                                                                                                                                                                     13,
                 4,
5,
7,
                                                                             18,
 [8,
                                                        14,
                                                                      16,
                                                                                           19,
                                                                                                  30, 29,
                                                                                                                20,
                                                                                                                       21,
                                                                                                                              12,
                                                                                                                                            10,
                                                                                                                                                   24,
                                                                                                                                                                25,
                                                                                                                                                                       26,
                                                                                                                                                                              27,
                                                                                                                                                                                     28,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1570.0,
                                                                                                  28, 29,
                                                                                                                      30,
  [8,
                                                   9, 10, 24,
                                                                                                                20,
                                                                                                                                                         14,
                         2,
                                                                                                        29,
                                                        14,
                                                               15,
                                                                                    18, 19,
                                                                                                  30,
                                                                                                                20,
                                                                                                                                           10,
                                                                                                                                                  24,
                                                                                                                                                         25,
                                                                                                                                                                       26,
  [8,
                                                                                                                                                                23,
                                                                                                                                                                             27,
                                                                                                                                                                                     28,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1570.0,
                 4,
4,
5,
                            19,
                                                   9, 10,
                                                               24,
15,
                                                                      25,
                                                                                    26, 27,
17, 19,
                                                                                                  28, 29,
                                                                                                               20,
                                                                                                                      30,
                                                                                                                                           17,
                                                                                                                                                         14,
25,
'[8,
                                                                                                                                                                                     13,
                                                                                                                                                   16,
                                                                                                                                                                                            221
                                                                                                                                                                                                      1585.0.
                                      9,
2,
                                                        14,
                                                                                                                                    13,
                                                                      16,
                                                                             18,
                                                                                                 30,
                                                                                                         29,
                                                                                                                20,
                                                                                                                                                   24,
                                                                                                                                                                       26,
                                                                                                                                                                                            22]
                                                                                                                                                                                                      1585.0
'[8,
                                                                                                                                                                                     28,
 [8,
                     3, 3, 5
5, 4, 1
7, 6,
                                                        10,
                                                               24,
                                                                      25,
                                                                                    26,
                                                                                           27,
                                                                                                  28,
                                                                                                         29,
                                                                                                                20,
                                                                                                                       30,
                                                                                                                              19,
                                                                                                                                    18,
                                                                                                                                            17,
                                                                                                                                                   16,
                                                                                                                                                         14,
                                                                                                                                                                       21,
                                                                                                                                                                              12,
                                                                                                                                                                                     13,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1585.0,
            1,
6,
                                                        10,
                                                               24,
                                                                                                  28, 29,
                                                                                                                30,
                                                                                                                              18,
                                                                                                                                            20,
                                                                                                                                                                16,
                                                                                                                                                                                     13,
                                                                                                                                                                                                       1625.0,
                                1, 6, 1
1, 2
9,
11,
                                        2,
                                                                                    26, 27,
                                                                                                  28,
                                                                                                                      19,
                                                                                                                                    17,
17,
17,
                                                        10,
                                                               24,
                                                                                                         29,
                                                                                                                30,
                                                                                                                              18,
                                                                                                                                            20,
                                                                                                                                                   21,
                                                                                                                                                         15,
  [8,
                                                                                                                                                                16,
                                                                                                                                                                       14,
                                                                                                                                                                              12,
                                                                                                                                                                                     13,
       2, 1
11,
5, 1
             1, 4, 3,
, 6, 5, 3
                                                                      25,
                                                                             23,
                                                                                                        29,
                                                   9, 10,
                                                               24,
                                                                                    26, 27,
                                                                                                                                                         15,
                                                                                                                                                                16,
                                                                                                                                                                       14,
'[8,
                                                                                                  28,
                                                                                                                30,
                                                                                                                       19, 18,
                                                                                                                                           20,
                                                                                                                                                                                            22
                                                                                                                                                                                                       1640.0,
                                                               24,
15,
24,
                                                                             23,
17,
                                                        10,
                                                                                    26,
18,
                                                                                                                              18,
                                                                                                                                                  21,
                          2,
5, 6,
4, 1,
7,
6,
                                                   9,
                                                                      25,
                                                                                                  28,
                                                                                                                                                         15,
                                                                                                                                                                16,
                                                                                                                                                                       14,
                                                                                                        29,
                                                                                                                                                                                     13,
 '[8,
                                                                                                                30,
                                                                                                                                                                              12,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1640.0.
                      1,
3, 5
3, 4
2,
5, 6
4,
                                                                      16,
23,
'[8,
                                                        14,
                                                                                                  30,
                                                                                                         29,
                                                                                                                                            10,
                                                                                                                                                   24,
                                                                                                                                                         23,
                                                                                                                                                                                                       1650.0,
                                                                                                                20,
                                                                                                                                                                25,
                                                                                                                                                                       26,
                                                                                                                                                                              27,
                                                                                                                                                                                     28,
                                                                                                                                                                                            22]
                                                                                                         29,
  [8,
                                                        10,
                                                                                    26,
                                                                                                  28,
                                                                                                                20,
                                                                                                                       30,
                                                                                                                              19,
                                                                                                                                            18,
                                                                                                                                                   16,
                                                                                                                                                          14,
                                                                                                                                                                15,
                                                                                                                                                                              12,
                                                                                                                                                                                     13,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1655.0,
              6,
                                        2,
                                                        10,
                                                               24,
                                                                      23,
                                                                                    26,
                                                                                           27,
                                                                                                  28,
                                                                                                         29,
                                                                                                                20,
                                                                                                                       30,
                                                                                                                              19,
                                                                                                                                    17,
                                                                                                                                                   16,
                                                                                                                                                         14,
                                                                                                                                                                15,
                                                                                                                                                                        21,
  [8,
                                                                                                                                            18,
                                                                                                                                                                              12,
                                                                                                                                                                                                       1655.0.
             3, 4, 1,
1, 4, 3,
6, 5, 3
       5,
2,
                                       9,
11,
                                                                                                         29,
                                                                                                                                    13,
                                                                                                                                                                              27,
                                                               15,
                                                                      16,
                                                                                                  30,
                                                                                                                                                         25,
                                                                                                                                                                23,
                                                                                                                20,
                                                                                                                                                                                                       1665.0,
                                                        14,
                                                                                    18,
                                                                                                                                            10,
                                                                                                                                                   24,
                                                                                                                                                                                     28,
                                                                                                                                                                                            22]
                                                                                                                                                                              12,
'[8,
                                                   9,
9,
                                                                             23,
                                                                                    26,
                                                                                                        29,
                                                                                                                                                         14,
                                                                                                                                                                15,
                                              7,
                                                        10,
                                                               24,
                                                                                                 28,
                                                                                                               20,
                                                                                                                       30,
                                                                                                                                           18,
                                                                                                                              19,
                                                                                                                                                                                            22]
                                                                                                                                                                                                       1670.0.
                                                                                                                                                         14,
                                                                                                                                                                15,
                                         2,
                                              7,
                                                        10,
                                                               24,
                                                                      25,
                                                                                    26,
                                                                                           27,
                                                                                                  28,
                                                                                                         29,
                                                                                                                20,
                                                                                                                       30,
                                                                                                                              19,
                                                                                                                                           18,
                                                                                                                                                                       21,
                                                                                                                                                                              12,
                                                                                                                                                                                            22]
                                                                                                                                                                                                      1670.0
                                                                             25,
                                                                                                                                                                        21,
                                                   9,
                                                         10,
                                                                      23,
                                                                                     26,
                                                                                           27,
                                                                                                  28,
                                                                                                         29,
                                                                                                                30,
                                                                                                                       20,
                                                                                                                              17,
                                                                                                                                     19,
                                                                                                                                                   16,
                                                                                                                                                          14,
                                                                                                                                                                 15,
                                                                                                                                                                               12,
```

Sorted trees based on link attenuation:

```
4, 5, 12, 1, 13, 5, 11, 2,
                                                                                                                                                                                                                                                                                                        334.2017938268823,
                                              7,
9,
9,
3,
                                                                                                                                                 20,
                                                                                                                                                                                          19,
19,
                                                                                                                                                                      16,
                                                                                                                                                                                18,
                                                                                                                                                                                                     30,
                                                                                                                                                                                                                                                                   24, 23, 22]
                                                                                                                                                                                                                                                                                                        338.3039772566434,
                                                                                                                             16, 15,
                                                                                                                                                           20, 17,
                                                                                                                                                                                                     30,
                                                                                                                                                                                                                                    27,
                                                                                                                                                                                                                                                                              23, 22]
                                                                                                                                                                                                                                                                                                        343.38756396419603
                                       2,
                                                                                                                  14,
                                                                                                                                                           20, 17,
                                                                                                                             16, 15,
                                                                                                                                                                                                                                                                   24, 23, 22]
                                                                                                                                                                                                                                                                                                        347.4897473939571,
                                                                                  14, 12, 21,
14, 12, 21,
14, 12, 21,
10, 13, 12,
10, 13, 12,
                                                                                                                                                                                                                                             23,
23,
                                                                                                                                                                                                                                                                                                       359.5979900638973,
359.60682880393944,
                                                                                                                                                                                                                                                         24,
                                                                                                                                                                                                                                                                              13, 22]':
         20,
18,
                                                                                                                                                                                          29, 28,
                                                                                                                             16, 18,
                                                                                                                                                                                                                                                                              13, 22]':
                                                                                                                                                                                                                                                        24,
                                                                                  10, 13, 12, 14, 15, 21, 20, 10, 13, 12, 14, 15, 21, 20, 14, 15, 16, 18, 19, 17, 20, 14, 15, 16, 18, 17, 19, 30,
                                                                                                                                                                                                                                             26, 25, 24, 23, 22]':
                                                                                                                                                           17, 16, 18, 19, 30, 29, 28, 27, 17, 16, 18, 19, 30, 29, 28, 27,
                                                                                                                                                                                                                         28, 27,
                                                                                                                                                                                                                                                                                                        363.2673724763449.
                                                                                                                                                                                                                                                                                                       367.0234168635076,
372.06608935553817,
                                                                                                                                                                                                                                              26, 25, 24, 23, 22]':
                                                                                                                                                                                          27, 26, 25, 23, 24, 10,
                                                                                                                                                           30, 29, 28,
                                                                                                                 18, 17, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 12, 21, 22]: 14, 16, 15, 21, 20, 17, 18, 19, 30, 29, 28, 27, 26, 25, 24, 23, 22]:
                                                                                                                                                                                                                                                                   12, 21, 22]':
                                                                                                                                                                                                                                                                                                        372.0749280955803,
                                                                                   10, 13, 12,
                                                                                                                                                                                                                                                                                                        372.4531426136587,
                                                                                   14, 12, 21,
                                                                                                                  15, 16, 18,
                                                                                                                                                           17, 20,
                                                                                                                                                                                          29, 28,
                                                                                                                                                                                                               27, 26,
                                                                                                                                                                                                                                    23,
                                                                                                                                                                                                                                                                                                        373.8570658402574,
                                                                                   14, 12, 21,
                                                                                                                            16, 18,
                                                                                                                                                           19, 30,
                                                                                                                                                                                          29, 28, 27,
                                                                                                                                                                                                                                    23, 25,
                                                                                                                                                                                                                                                                              13, 22]':
                                                                                                                                                                                                                                                                                                        373.8659045802995,
                                                                                  10, 13, 12,
10, 13, 12,
10, 13, 12,
10, 13, 12,
                                                                                                                                                           18, 19,
18, 17,
                                                                                                                                                                                                                                                                              23, 22]':
                                                                                                                             15, 14,
                                                                                                                                                                                                     30,
                                                                                                                                                                                                                                                                                                        374.2654461475021,
         2, 1, 4, 3, 5, 6, 11, 2, 11, 6, 5, 3, 4, 1, 2, 11, 6, 5, 3, 4, 1, 2, 11, 6, 5, 3, 4, 1, 2, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3, 11, 9, 7, 2, 1, 4, 3
                                                                                                                 21, 15, 14, 16,
21, 15, 14, 16,
14, 16, 15, 21,
21, 15, 14, 16,
21, 15, 14, 16,
10, 24, 23, 25,
                                                                                                                                                                                                     20,
                                                                                                                                                                                                                                                                                                        374.2742848875442,
                                                                                                                                                                                                                                             26, 25, 24, 23, 22]':
26, 25, 24, 23, 22]':
                                                                                                                                                                                          19, 30,
                                                                                                                                                                                                                                                                                                        376.2091870008214,
                                                                                                                                                           18, 19, 17,
18, 17, 19,
                                                                   7, 9,
7, 9,
5, 6,
                                                                                                                                                                               17, 20, 30, 29, 28, 27,
                                                                                                                                                                                                                                                                                                        378.02149053466474
                                                                                                                                                                                          30, 20, 29, 28, 27, 26, 25, 24, 23, 22]:
29, 20, 30, 19, 18, 17, 16, 15, 21, 22]:
                                                                                  10, 13, 12,
14, 12, 13,
                                                                                                                                                                                                                                                                                                        378.03032927470684,
                                                                                                                                                           26, 27,
                                                                                                                                                                                                                                                                                                        380.8521605932535,
                                                                                                                 15, 16, 17, 18,
18, 19, 17, 20,
                                                                                                                                                                                          29, 28, 27, 26,
27, 26, 23, 25,
                                                                   5, 6,
                                                                                   14, 12, 21,
                                                                                                                                                           19, 30, 20,
                                                                                                                                                                                                                                    25, 23,
                                                                                                                                                                                                                                                                              13, 22]':
                                                                                                                                                                                                                                                                                                        382.6140310668409,
                                                                   5, 6,
                                                                                   14, 15, 16,
                                                                                                                                                 20, 30, 29,
                                                                                                                                                                                                                                             10, 13,
                                                                                                                                                                                                                                                                   12, 21, 22]':
                                                                                                                                                                                                                                                                                                        386.32516513189825,
                                                                                   14, 15, 16,
                                                                                                                                                           20, 29, 28, 27, 26, 23,
                                                                                                                                                                                                                                    24, 10,
                                                                                                                                                                                                                                                                   12, 21, 22]
                                                                                                                                                                                                                                                                                                        386.33400387194035,
                            7, 2, 1, 4, 3
7, 2, 1, 4, 3
1, 1, 2, 7, 9,
1, 1, 2, 7, 9,
7, 2, 1, 4, 3
                                                                                  14, 12, 13,
14, 12, 21,
14, 12, 21,
14, 15, 16,
         11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 12, 13, 10, 24, 25, 23, 26, 27, 28, 29, 20, 30, 19, 18, 17, 16, 15, 21, 22] 5, 3, 4, 1, 2, 7, 9, 11, 6, 14, 12, 21, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 12, 21, 15, 16, 18, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 15, 21, 20, 17, 16, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 22] 12, 14, 3, 5, 6, 14, 15, 21, 20, 17, 16, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 22] 12, 14, 4, 3, 5, 6, 14, 15, 21, 20, 17, 16, 18, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 22] 11, 6, 5, 3, 4, 1, 2, 7, 9, 10, 13, 12, 21, 15, 14, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 24, 23, 22] 11, 6, 5, 3, 4, 1, 2, 7, 9, 10, 13, 12, 21, 15, 14, 16, 17, 18, 19, 30, 20, 29, 28, 27, 26, 25, 24, 23, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 15, 16, 18, 19, 17, 20, 30, 29, 28, 27, 26, 25, 23, 24, 10, 13, 12, 21, 22] 15, 3, 4, 1, 2, 7, 9, 11, 6, 14, 15, 16, 18, 19, 17, 20, 30, 29, 28, 27, 26, 25, 23, 24, 10, 13, 12, 21, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 12, 21, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 12, 21, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 12, 21, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 25, 23, 24, 10, 13, 12, 21, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 12, 21, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 13, 22] 12, 14, 15, 16, 14, 12, 21, 15, 16, 18, 19, 17, 20, 30, 29, 28, 27, 26, 23, 25, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 12, 21, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 15, 21, 20, 17, 18, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 15, 21, 20, 17, 18, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 15, 15, 16, 18, 17, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3, 5, 6, 14, 15, 21, 20, 17, 18, 19, 30, 20, 29, 28, 27, 26, 23, 25, 24, 10, 13, 22] 11, 9, 7, 2, 1, 4, 3
                                                                                                                                                           26, 27,
                                                                                                                                                                               28,
30,
                                                                                                                            24, 25,
                                                                                                                                                                                          29, 20,
                                                                                                                                                                                                                                    18,
                                                                                                                                                                                                                                                                              21, 22]':
                                                                                                                                                                                                                                                                                                        388.73343704943005,
                                                                                                                                                                                                                                                                             13, 22]':
13, 22]':
                                                                                                                                                                                                                                                                                       22]':
                                                                                                                                                                                                                                                                                                        391.7400438844757,
                                                                                                                                                                                                                                                                                                        391.7488826245178.
                                                                                                                                                                                                                                                                                                        395.0821303584817,
                                                                                                                                                                                                                                                                   12, 21, 22]':
                                                                                                                                                                                                                                                                                                        396.87310684320096
                                                                                                                                                                                                                                                                              13, 22]':
                                                                                                                                                                                                                                                                                                        396.9573557037231,
                                                                                                                                                                                                                                                                                                        397.2814871504456,
                                                                                                                                                                                                                                                                                                        401.0375315376083,
                                                                                                                                                                                                                                                                   12, 21, 22]':
                                                                                                                                                                                                                                                                                                        404.20814317611655,
                                                                                                                                                                                                                                                                              21, 22]':
                                                                                                                                                                                                                                                                                                       404.21698191615866
                                                                                                                                                                                                                                                                                       22]': 405.7120931108023,
                                                                                                                                                                                                                                                                             13, 22]': 405.9991196608358,
13, 22]': 406.0079584008779,
13, 22]': 406.14312584103686
[8,
'[8,
                                                                                                                                                                                                                                                                                                       406.14312584103686
                                                                                                                                                                                                                                                                                                        409.3412061348418,
```