2017-5-11: Testing the algorithms we have made at this point.   
The algorithm was bugged so it found a solution earlier. This is also the cause for the fact that the different depthfirst algorithms almost never find the same solution.

Each genome gets randomized and put through all the methods we have (depthfirst, depthfirst with archive and flipsorter)

Genome length: 6

test: 1

genome to convert: [6, 2, 5, 3, 4, 1]

Depthfirst 1 (with archive):

test: 1

genome to convert: [6, 2, 5, 3, 4, 1]

Depthfirst 1 (with archive):

number of genomes in archive: 397

# of double found sequences: 176

final mutation tracker: [1, 11, 7]

program took 0.0 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [1, 11, 13]

program took 0.0 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.0 seconds to find solution

test: 2

genome to convert: [4, 2, 6, 3, 1, 5]

Depthfirst 1 (with archive):

number of genomes in archive: 218

# of double found sequences: 44

final mutation tracker: [10, 9, 1]

program took 0.0 seconds to find solution

Depthfirst 0 (no archive):

test: 2

genome to convert: [4, 2, 6, 3, 1, 5]

Depthfirst 1 (with archive):

number of genomes in archive: 207

# of double found sequences: 38

final mutation tracker: [0, 10, 9, 1]

program took 0.0 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [0, 10, 6, 0]

program took 0.0 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 5

program took 0.0 seconds to find solution

test: 3

genome to convert: [4, 3, 1, 2, 5, 6]

Depthfirst 1 (with archive):

number of genomes in archive: 55

# of double found sequences: 7

final mutation tracker: [2, 0, 1]

program took 0.0 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [2, 5, 0]

program took 0.0 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 3

program took 0.0 seconds to find solution

test: 4

genome to convert: [1, 3, 2, 6, 4, 5]

Depthfirst 1 (with archive):

test: 4

genome to convert: [1, 3, 2, 6, 4, 5]

Depthfirst 1 (with archive):

number of genomes in archive: 458

# of double found sequences: 232

final mutation tracker: [2, 1, 10, 0]

program took 0.015586614608764648 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [1, 3, 8]

program took 0.0 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 3

program took 0.0 seconds to find solution

test: 5

genome to convert: [1, 5, 6, 2, 3, 4]

Depthfirst 1 (with archive):

number of genomes in archive: 191

# of double found sequences: 35

final mutation tracker: [9, 6]

program took 0.0 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [9, 6]

program took 0.0 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.0 seconds to find solution

Length 7:

test: 1

genome to convert: [5, 4, 3, 1, 2, 7, 6]

Depthfirst 1 (with archive):

number of genomes in archive: 3710

# of double found sequences: 2948

final mutation tracker: [9, 6, 18, 1]

program took 0.047 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [20, 4, 17, 0]

program took 0.031 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 2

genome to convert: [3, 5, 6, 1, 2, 7, 4]

Depthfirst 1 (with archive):

number of genomes in archive: 257

# of double found sequences: 28

final mutation tracker: [0, 8, 17]

program took 0.000 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [4, 11, 7]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 3

genome to convert: [4, 2, 6, 1, 3, 5, 7]

Depthfirst 1 (with archive):

number of genomes in archive: 4773

# of double found sequences: 11476

final mutation tracker: [18, 16, 7, 13]

program took 0.125 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [4, 12, 10]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 4

genome to convert: [4, 5, 1, 3, 6, 2, 7]

Depthfirst 1 (with archive):

number of genomes in archive: 2980

# of double found sequences: 1194

final mutation tracker: [6, 3, 19, 0]

program took 0.031 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [6, 2, 19, 0]

program took 0.016 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 5

program took 0.000 seconds to find solution

test: 5

genome to convert: [2, 7, 1, 5, 3, 6, 4]

Depthfirst 1 (with archive):

number of genomes in archive: 1047

# of double found sequences: 235

final mutation tracker: [1, 19, 3]

program took 0.000 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [2, 16, 11, 0]

program took 0.016 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 6

genome to convert: [3, 1, 7, 6, 4, 2, 5]

Depthfirst 1 (with archive):

number of genomes in archive: 1115

# of double found sequences: 257

final mutation tracker: [2, 0, 13, 0]

program took 0.000 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [2, 3, 16, 0]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.016 seconds to find solution

test: 7

genome to convert: [1, 7, 5, 3, 6, 4, 2]

Depthfirst 1 (with archive):

number of genomes in archive: 4122

# of double found sequences: 5027

final mutation tracker: [12, 9, 1, 0]

program took 0.062 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [2, 15, 7, 0]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 8

genome to convert: [4, 7, 2, 5, 3, 1, 6]

Depthfirst 1 (with archive):

number of genomes in archive: 2169

# of double found sequences: 664

final mutation tracker: [4, 2, 10]

program took 0.016 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [1, 0, 2]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 9

genome to convert: [5, 7, 6, 4, 2, 3, 1]

Depthfirst 1 (with archive):

number of genomes in archive: 319

# of double found sequences: 35

final mutation tracker: [0, 11, 1]

program took 0.000 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [2, 7, 10]

program took 0.016 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 10

genome to convert: [3, 4, 6, 1, 5, 7, 2]

Depthfirst 1 (with archive):

number of genomes in archive: 2207

# of double found sequences: 669

final mutation tracker: [4, 3, 20]

program took 0.016 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [4, 2, 20]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

Length 8:

test: 1

genome to convert: [6, 5, 3, 1, 8, 7, 4, 2]

Depthfirst 1 (with archive):

number of genomes in archive: 2971

# of double found sequences: 331

final mutation tracker: [2, 14, 21]

program took 0.031 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [0, 2, 14, 21]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 2

genome to convert: [7, 6, 4, 3, 1, 2, 5, 8]

Depthfirst 1 (with archive):

number of genomes in archive: 11362

# of double found sequences: 3455

final mutation tracker: [12, 8, 14, 1]

program took 0.109 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [3, 23, 21, 0]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 5

program took 0.000 seconds to find solution

test: 3

genome to convert: [4, 3, 2, 1, 6, 8, 7, 5]

Depthfirst 1 (with archive):

number of genomes in archive: 3679

# of double found sequences: 457

final mutation tracker: [3, 4, 2, 0]

program took 0.031 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [3, 3, 4, 0]

program took 0.016 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 4

genome to convert: [8, 6, 3, 7, 4, 1, 2, 5]

Depthfirst 1 (with archive):

number of genomes in archive: 15234

# of double found sequences: 5183

final mutation tracker: [16, 27, 24]

program took 0.141 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [3, 15, 16, 5, 0]

program took 0.234 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 5

genome to convert: [7, 5, 4, 1, 6, 3, 8, 2]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 38229

# of double found sequences: 101213

final mutation tracker: [3, 6, 26, 24, 3]

program took 1.094 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [24, 9, 20, 0]

program took 0.063 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 5

program took 0.000 seconds to find solution

test: 6

genome to convert: [3, 4, 6, 2, 7, 1, 8, 5]

Depthfirst 1 (with archive):

number of genomes in archive: 16797

# of double found sequences: 6031

final mutation tracker: [19, 0, 22, 0]

program took 0.156 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [2, 13, 20, 0]

program took 0.000 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 5

program took 0.000 seconds to find solution

test: 7

genome to convert: [5, 7, 3, 1, 2, 4, 8, 6]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 1281

# of double found sequences: 111

final mutation tracker: [0, 2, 0, 21]

program took 0.000 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [4, 17, 0, 1]

program took 0.297 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 8

genome to convert: [6, 7, 5, 4, 2, 3, 1, 8]

Depthfirst 1 (with archive):

number of genomes in archive: 14579

# of double found sequences: 4859

final mutation tracker: [16, 5, 7, 2]

program took 0.141 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [6, 13, 3]

program took 0.016 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 3

program took 0.000 seconds to find solution

test: 9

genome to convert: [1, 8, 2, 7, 5, 4, 6, 3]

Depthfirst 1 (with archive):

number of genomes in archive: 1981

# of double found sequences: 200

final mutation tracker: [1, 18, 25, 1]

program took 0.016 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [0, 6, 6, 1]

program took 0.016 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 10

genome to convert: [1, 5, 3, 7, 2, 4, 6, 8]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 14718

# of double found sequences: 4817

final mutation tracker: [0, 17, 7, 10]

program took 0.141 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [8, 25, 19, 0]

program took 0.016 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

Process finished with exit code 0

Length 9:

test: 1

genome to convert: [5, 1, 8, 4, 2, 6, 3, 9, 7]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 250976

# of double found sequences: 128947

final mutation tracker: [5, 8, 0, 7]

program took 2.938 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [2, 28, 26, 8, 0]

program took 0.391 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 2

genome to convert: [4, 7, 5, 6, 8, 1, 2, 3, 9]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 327590

# of double found sequences: 452504

final mutation tracker: [9, 20, 34, 2]

program took 6.235 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [3, 12, 24, 21, 0]

program took 0.469 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 3

genome to convert: [5, 3, 6, 9, 1, 8, 2, 7, 4]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 61226

# of double found sequences: 7343

final mutation tracker: [0, 32, 21, 33, 0]

program took 0.438 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [6, 1, 2, 34]

program took 0.859 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 4

genome to convert: [3, 7, 6, 5, 2, 8, 9, 4, 1]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 207102

# of double found sequences: 74056

final mutation tracker: [3, 31, 18, 13, 2]

program took 2.063 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [1, 27, 8, 24]

program took 0.250 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 5

program took 0.000 seconds to find solution

test: 5

genome to convert: [8, 1, 5, 9, 2, 3, 4, 7, 6]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 214188

# of double found sequences: 81549

final mutation tracker: [4, 2, 35, 5]

program took 2.203 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [26, 9, 25, 7]

program took 3.727 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 6

genome to convert: [6, 7, 8, 2, 1, 4, 5, 3, 9]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 299065

# of double found sequences: 258216

final mutation tracker: [7, 14, 5, 10, 0]

program took 4.445 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [8, 9, 24, 7, 0]

program took 1.188 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 3

program took 0.000 seconds to find solution

test: 7

genome to convert: [7, 2, 1, 5, 8, 4, 3, 6, 9]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 17069

# of double found sequences: 1666

final mutation tracker: [0, 9, 16, 7, 0]

program took 0.125 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [3, 29, 0, 33, 0]

program took 0.531 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 8

genome to convert: [8, 5, 2, 4, 6, 3, 7, 9, 1]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 15527

# of double found sequences: 1464

final mutation tracker: [0, 8, 21, 32]

program took 0.094 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [5, 29, 31, 9]

program took 0.813 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 7

program took 0.000 seconds to find solution

test: 9

genome to convert: [4, 9, 7, 1, 3, 2, 8, 5, 6]

Depthfirst 1 (with archive):

number of genomes in archive: 60285

# of double found sequences: 7417

final mutation tracker: [31, 9, 34]

program took 0.438 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [8, 0, 27, 0]

program took 0.031 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 10

genome to convert: [9, 5, 7, 4, 3, 8, 1, 6, 2]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 186010

# of double found sequences: 57889

final mutation tracker: [3, 12, 17, 11, 0]

program took 1.735 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [1, 17, 21, 7, 0]

program took 0.219 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 7

program took 0.000 seconds to find solution

Length 10:

test: 1

genome to convert: [8, 1, 4, 3, 9, 6, 2, 7, 10, 5]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 2036188

# of double found sequences: 560877

final mutation tracker: [18, 10, 10, 20]

program took 20.491 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [5, 41, 43, 25, 0]

program took 1.797 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 7

program took 0.000 seconds to find solution

test: 2

genome to convert: [1, 2, 3, 4, 9, 5, 8, 6, 10, 7]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 2657541

# of double found sequences: 1253430

final mutation tracker: [27, 33, 36, 22, 0]

program took 32.450 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 6

Depthfirst 0 (no archive):

final mutation tracker: [1, 2, 29, 5, 1]

program took 13.093 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 4

program took 0.000 seconds to find solution

test: 3

genome to convert: [2, 4, 6, 10, 9, 5, 1, 7, 3, 8]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 565054

# of double found sequences: 48606

final mutation tracker: [3, 44, 24, 43, 0]

program took 3.938 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [36, 36, 20, 38]

program took 10.048 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 9

program took 0.000 seconds to find solution

test: 4

genome to convert: [6, 3, 8, 4, 2, 9, 7, 5, 1, 10]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 2912387

# of double found sequences: 1827913

final mutation tracker: [33, 15, 6, 25, 2]

program took 40.095 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [4, 6, 28, 17]

program took 1.235 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 5

genome to convert: [10, 2, 4, 8, 5, 9, 6, 3, 1, 7]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 880436

# of double found sequences: 99080

final mutation tracker: [6, 21, 26, 37, 2]

program took 6.673 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [3, 7, 32, 36]

program took 0.859 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 9

program took 0.000 seconds to find solution

test: 6

genome to convert: [3, 2, 4, 10, 7, 8, 5, 6, 1, 9]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 469205

# of double found sequences: 36878

final mutation tracker: [3, 12, 5, 39]

program took 3.219 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [38, 29, 36, 8, 0]

program took 10.630 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 9

program took 0.000 seconds to find solution

test: 7

genome to convert: [3, 1, 5, 2, 9, 8, 10, 6, 4, 7]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 2589921

# of double found sequences: 1151529

final mutation tracker: [26, 24, 34, 26, 0]

program took 30.461 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 6

Depthfirst 0 (no archive):

final mutation tracker: [0, 34, 40, 11, 34, 0]

program took 9.571 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 8

genome to convert: [5, 2, 7, 9, 6, 8, 1, 10, 4, 3]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 1570639

# of double found sequences: 302756

final mutation tracker: [12, 39, 23, 38, 0]

program took 13.324 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [38, 21, 36, 20, 0]

program took 10.343 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 9

genome to convert: [3, 1, 2, 4, 5, 10, 8, 6, 7, 9]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 2500168

# of double found sequences: 1020201

final mutation tracker: [24, 43, 30, 15, 0]

program took 28.538 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 6

Depthfirst 0 (no archive):

final mutation tracker: [1, 5, 28, 31, 16]

program took 13.870 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 10

genome to convert: [3, 4, 8, 9, 10, 2, 7, 6, 1, 5]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 5

Depthfirst 1 (with archive):

number of genomes in archive: 2382131

# of double found sequences: 872072

final mutation tracker: [23, 2, 24, 1]

program took 26.534 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 5

Depthfirst 0 (no archive):

final mutation tracker: [14, 9, 2, 26]

program took 3.922 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

Length 11:

test: 1

genome to convert: [3, 1, 4, 8, 10, 9, 11, 5, 2, 7, 6]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 6

Depthfirst 1 (with archive):

number of genomes in archive: 26146072

# of double found sequences: 12289236

final mutation tracker: [2, 35, 41, 17, 23]

program took 332.488 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 6

Depthfirst 0 (no archive):

final mutation tracker: [1, 18, 18, 13, 47, 0]

program took 37.419 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 6

program took 0.000 seconds to find solution

test: 2

genome to convert: [2, 4, 6, 3, 5, 10, 7, 8, 9, 1, 11]

Depthfirst 1 (with archive):

number of genomes in archive: 7217976

# of double found sequences: 666541

final mutation tracker: [27, 16, 45, 37]

program took 61.185 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [21, 35, 17, 39, 0]

program took 10.673 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 3

genome to convert: [4, 11, 7, 3, 5, 1, 9, 10, 6, 8, 2]

Depthfirst 1 (with archive):

number of genomes in archive: 5191947

# of double found sequences: 399360

final mutation tracker: [19, 7, 39, 12, 0]

program took 37.219 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [11, 17, 22, 24, 0]

program took 5.674 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 9

program took 0.000 seconds to find solution

test: 4

genome to convert: [10, 3, 11, 4, 2, 9, 6, 1, 5, 8, 7]

Depthfirst 1 (with archive):

number of genomes in archive: 6021745

# of double found sequences: 500753

final mutation tracker: [22, 22, 19, 48, 1]

program took 43.979 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [38, 26, 2, 23]

program took 19.747 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 5

genome to convert: [9, 5, 4, 8, 2, 6, 1, 10, 3, 7, 11]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 6

Depthfirst 1 (with archive):

number of genomes in archive: 23734990

# of double found sequences: 8643594

final mutation tracker: [2, 13, 6, 30, 8]

program took 273.846 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [44, 4, 25, 7]

program took 21.768 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 6

genome to convert: [5, 9, 3, 7, 4, 6, 8, 10, 2, 11, 1]

Depthfirst 1 (with archive):

number of genomes in archive: 9912245

# of double found sequences: 1152751

final mutation tracker: [38, 53, 44, 6, 0]

program took 77.139 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 6

Depthfirst 0 (no archive):

final mutation tracker: [2, 5, 48, 37, 13]

program took 58.270 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 10

program took 0.000 seconds to find solution

test: 7

genome to convert: [10, 4, 9, 5, 8, 3, 6, 1, 11, 2, 7]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 6

Depthfirst 1 (with archive):

number of genomes in archive: 14862340

# of double found sequences: 2563621

final mutation tracker: [1, 9, 12, 44, 25]

program took 133.999 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 6

Depthfirst 0 (no archive):

final mutation tracker: [1, 31, 25, 14, 31]

program took 45.117 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 8

program took 0.000 seconds to find solution

test: 8

genome to convert: [2, 6, 11, 3, 7, 8, 1, 4, 5, 10, 9]

Depthfirst 1 (with archive):

number of genomes in archive: 10148381

# of double found sequences: 1167425

final mutation tracker: [39, 49, 11, 46, 0]

program took 78.814 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [52, 46, 47, 26]

program took 26.719 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 9

program took 0.000 seconds to find solution

test: 9

genome to convert: [10, 6, 3, 2, 9, 4, 7, 5, 8, 1, 11]

Depthfirst 1 (with archive):

TRY AGAIN: going to depth: 6

Depthfirst 1 (with archive):

number of genomes in archive: 21082720

# of double found sequences: 6164918

final mutation tracker: [1, 47, 49, 23, 33, 0]

program took 218.442 seconds to find solution

Depthfirst 0 (no archive):

TRY AGAIN: going to depth: 6

Depthfirst 0 (no archive):

final mutation tracker: [6, 17, 17, 1, 37]

program took 176.695 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 7

program took 0.000 seconds to find solution

test: 10

genome to convert: [7, 2, 9, 3, 1, 10, 11, 8, 6, 5, 4]

Depthfirst 1 (with archive):

number of genomes in archive: 9106559

# of double found sequences: 982261

final mutation tracker: [35, 20, 49, 37, 0]

program took 69.592 seconds to find solution

Depthfirst 0 (no archive):

final mutation tracker: [36, 30, 52, 54, 0]

program took 18.404 seconds to find solution

Flipsorter:

Genome sequence:

Number of mutations: 7

program took 0.000 seconds to find solution