2017-5-11: Testing the algorithms we have made at this point

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