

Algorithms in Genome Research
Winter 2019/2020

Exercises

Number 10b, Discussion: 2020 January 31

3. Given the following pair of linear genomes:

$$A = 1 \ 7 \ 2 \ 4 \ 3 \ 5 \ -6 \ 8 \ 12 \ 11 \ 9 \ 10$$

and

$$B = 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10 \ 11 \ 12.$$

An optimal inversion r applied to A is so that $r.A = A'$ and $d(A', B) = d(A, B) - 1$.

List all possible first optimal inversions that could be applied to A . How many are split inversions, how many are neutral inversions and how many are joint inversions?