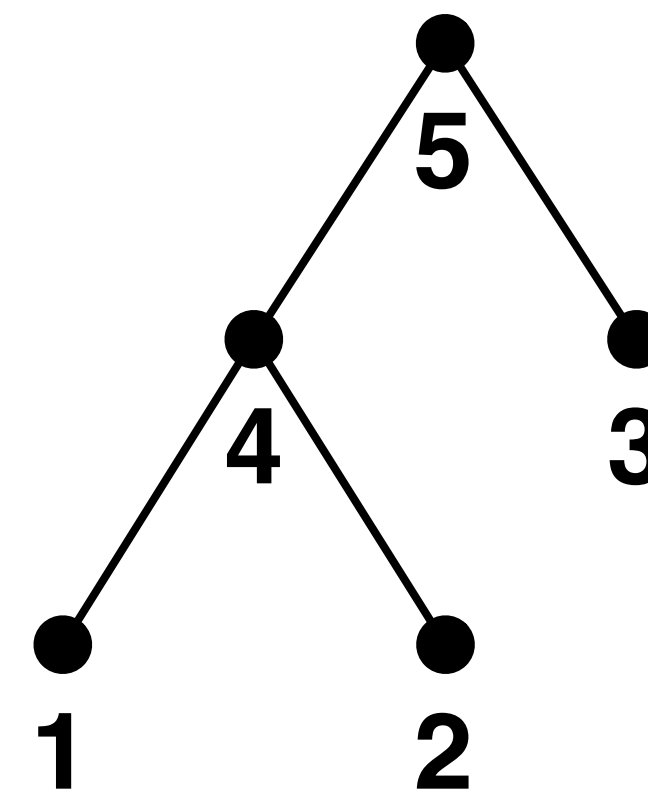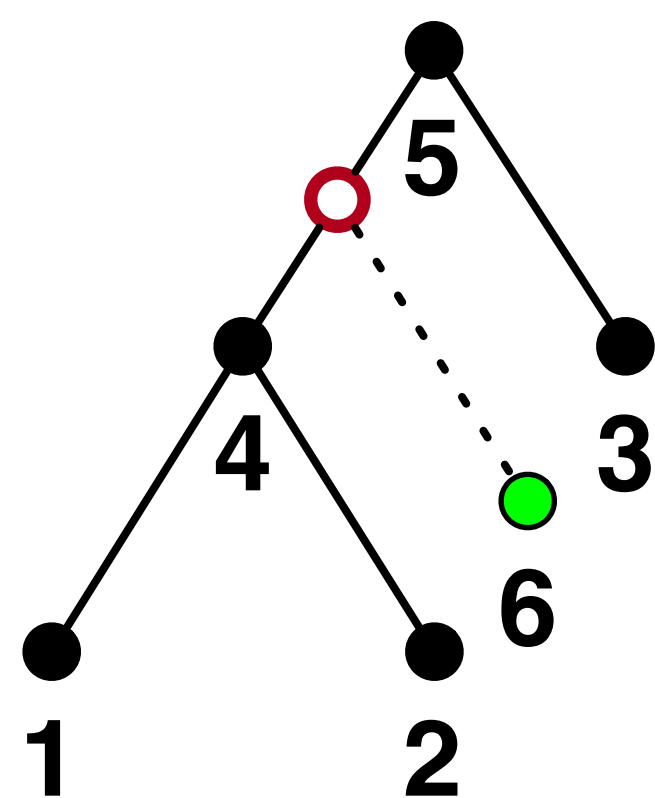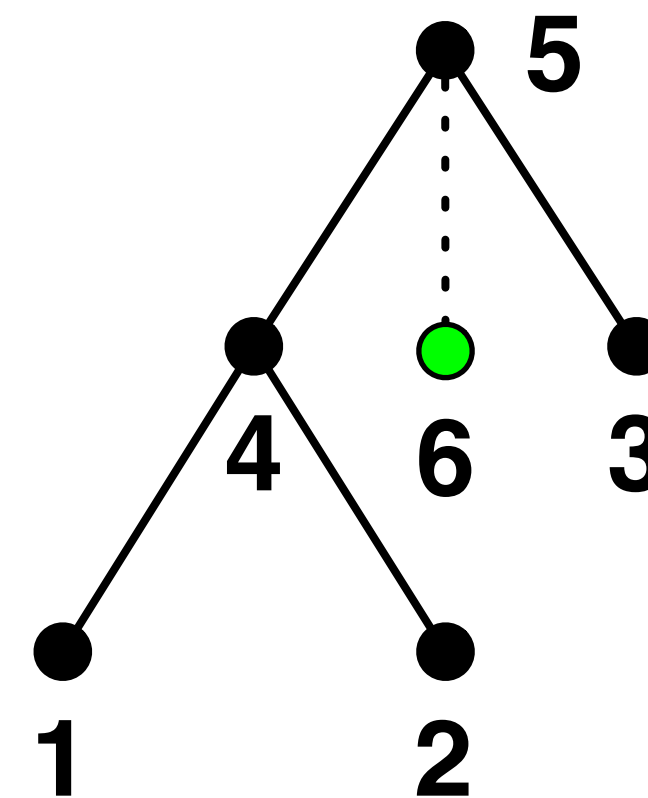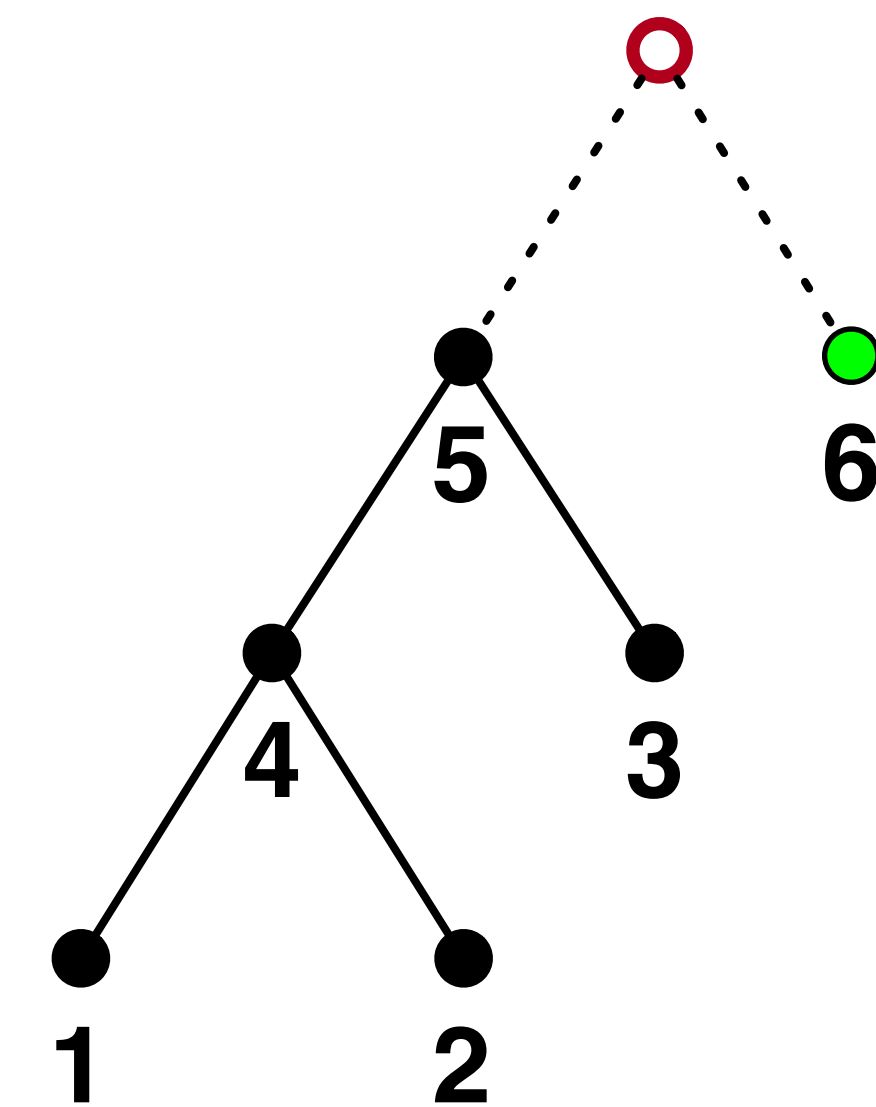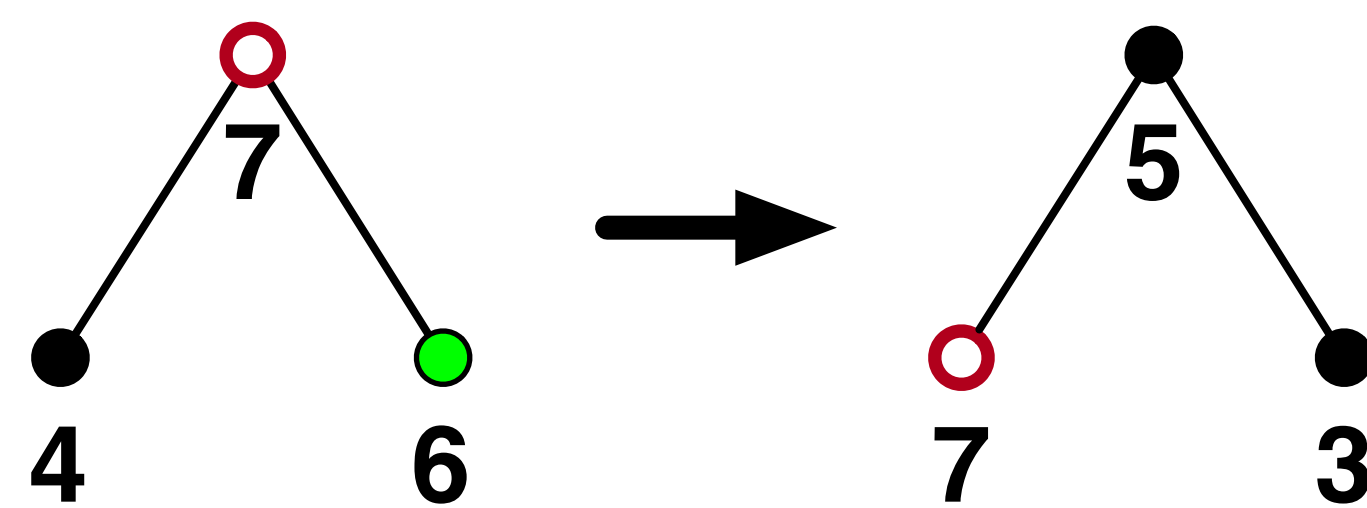# A

Original alignment

Adding to a branch

Adding to a node
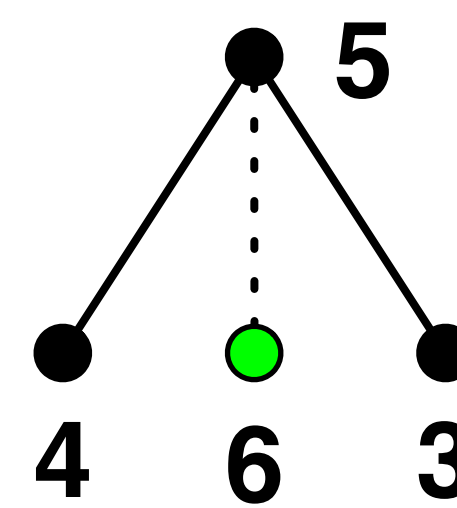
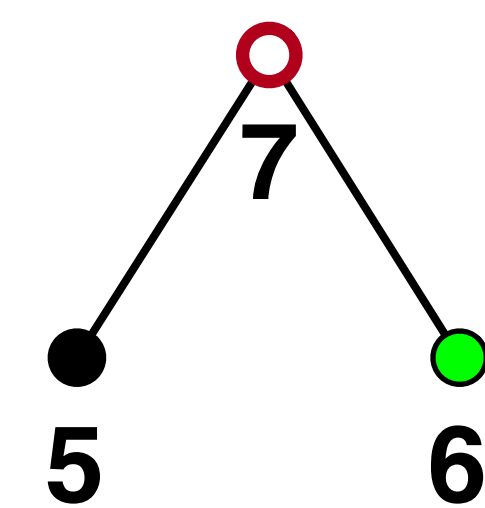Adding as an outgroup

2 subproblems needed

1 subproblem needed

1 subproblem needed

B

Alignment	Precision	Recall	F1-score	CPU time
Genome added to branch	97.27%	88.40%	92.63%	11 h
Genome added to node	97.21%	88.35%	92.57%	16 h
Full realignment of entire tree & new genome	97.19%	88.33%	92.55%	176 h