

Exercises – Algorithms for Genome Research

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<http://wiki.techfak.uni-bielefeld.de/gi/Teaching/2014winter/AlgoGR>

Exercise List 5 — 28.11.2014

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Exercise 1 Solve the consecutive-ones problem for the following clone-probe hybridization matrix M (if possible).

$$M = \begin{pmatrix} 0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 1 & 1 & 0 \\ 1 & 0 & 0 & 1 & 0 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 & 1 & 1 & 1 & 0 \\ 0 & 1 & 0 & 0 & 1 & 1 & 1 & 0 \\ 1 & 0 & 0 & 1 & 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 & 0 & 0 & 1 & 0 \\ 1 & 0 & 0 & 1 & 1 & 1 & 1 & 0 \end{pmatrix}$$

Exercise 2 Given the following PQ-tree, apply a restriction operation considering the set $S = \{d, e, g, h, i, j, k, l, n\}$.

