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Recognition of split-graphic sequences

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Abstract. Using different definitions of split graphs we propose quick algorithms for the recognition and extremal reconstruction of split sequences among integer, regular, and graphic sequences.

1 Basic definitions

In this paper a, b, l, m, n, p and q denote nonnegative integers with $b \geq a$ and $l + m \geq 1$. We follow the terminology of *Handbook of Graph Theory* [28] written by Gross, Yellen and Zhang.

An (a, b, n)-***graph*** is a loopless graph in which different vertices are connected at least by a and at most by b edges [43, 44]. A (b, b, l)-***graph*** is denoted by K_l^b and is called a b-***clique*** or b-***complete graph***. Clearly, $K_l^1 = K_l$, where K_l is the ***complete graph*** on l vertices. Its complement, $\overline{K}_l$ is called ***independent graph*** on l vertices.

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