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## BALANCED VERTEX SETS IN GRAPHS

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Let  $v_1, \dots, v_r$  be a  $\beta$ -sequence (Definition 1.2) in an  $n$ -vertex graph  $G$  and  $v_{r+1}, \dots, v_n$  be the other vertices of  $G$ . In this paper we prove that if  $v_1, \dots, v_r$  is balanced, that is

$$\frac{1}{r}(d(v_1) + \dots + d(v_r)) = \frac{1}{n}(d(v_1) + \dots + d(v_n)),$$

and if the number of edges of  $G$  is big enough, then  $G$  is regular.

**Keywords:** saturated sequence, balanced sequence, generalized  $r$ -partite graph, generalized Turan's graph

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