

Zbl 129.40101

**Erdős, Pál**

*Some remarks on Ramsey's theorem* (In English)

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Let  $G$  be a graph whose vertices are the integers. If  $G$  contains no infinite complete subgraph then according to *Ramsey's theorem* [Proc. London math. Soc. 30, 264-286 (1929)] it contains an infinite set of independent vertices; it cannot be asserted that the vertices  $n_1 < n_2 < \dots$  of such an independent set do not tend to infinity too rapidly. However, it is shown that if  $G$  contains no triangles, then there exists an infinite set of independent vertices  $n_1 < n_2 < \dots$  such that  $n_k < (1 + o(1))k^2/2$  for infinitely many  $k$ .

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Classification:

05C55 Generalized Ramsey theory