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Vertex covering with monochromatic paths. (In English)

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This note proves that if the edges of K_n are colored red and blue, then for each integer $l > 0$, there exist l monochromatic paths of a common color whose union covers $n\left(\frac{l+1}{l+2}\right)$ vertices. This Ramseyian result is a sharp generalization of the result of *L. Gerencsér* and the second author [On Ramsey type problems, Ann. Univ. Sci. Budap. Rolando Eötvös, Sect. Math. 10, 167-170 (1967; Zbl 163.45502)] that there is a path of at least $\lfloor \frac{2n}{3} \rfloor + 1$ vertices.

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05C38 Paths and cycles
05C15 Chromatic theory of graphs and maps

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