ON MINIMALLY RAINBOW K-CONNECTED GRAPHS

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An edge-coloured graph G is *rainbow connected* if any two vertices are connected by a path whose edges have distinct colours. A graph G is called *rainbow k-connected*, if there is an edge-colouring of G with k colours such that G is rainbow-connected.

In this talk we will study rainbow k-connected graphs with a minimum number of edges. For an integer $n \geq 3$ and $1 \leq k \leq n-1$ let $t(n,k)$ denote the minimum size of a rainbow k-connected graph G of order n. We will compute exact values and upper bounds for $t(n,k)$.

Keywords: edge colouring, rainbow connection, rainbow k-connected.

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References

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