**Minimum $k$-path vertex cover**

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A subset $S$ of vertices of a graph $G$ is called a *$k$-path vertex cover* if every path of order $k$ in $G$ contains at least one vertex from $S$. Denote by $\psi_k(G)$ the minimum cardinality of a $k$-path vertex cover in $G$. We show that the problem of determining $\psi_k(G)$ is NP-hard for each $k \geq 2$, while for trees the problem can be solved in linear time. We investigate upper bounds on the value of $\psi_k(G)$ and provide several estimations and exact values of $\psi_k(G)$. We also prove that $\psi_3(G) \leq (2n + m)/6$, for every graph $G$ with $n$ vertices and $m$ edges.