

On Subdivision Graphs of Cylinder Graphs which are 2-steps Hamiltonian II

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Let G be a graph with vertex set $V(G)$ and edge set $E(G)$. A (p, q) -graph $G = (V, E)$ is said to be $AL(k)$ -traversal if there exist a sequence of vertices $\{v_1, v_2, \dots, v_p\}$ such that for each $i = 1, 2, \dots, p - 1$, the distance for v_i and v_{i+1} is equal to k . We call a graph G a k -steps Hamiltonian graph if it has a $AL(k)$ -traversal in G and the distance between v_p and v_1 is k . In this paper, we give a construction of subdivision graphs of cylinder graphs, $C_m \times P_n$ where the subdivision is on C_m , to be 2-steps Hamiltonian.

Keywords: k -steps Hamiltonian, cylinder graphs, subdivision graphs, $AL(k)$ -traversal