

VERTEX POLYNOMIAL OF WELL KNOWN GRAPHS AND NEWLY CONSTRUCTED GRAPHS AND THEIR VERTEX POLYNOMIAL

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Abstract

Let G be a graph. The vertex polynomial of the graph G is defined as $V(G; x) = \sum_{k=0}^{\Delta(G)} v_k x^k$ where $\Delta(G) = \max\{deg(v)/v \in V(G)\}$ and v_k is the number of vertices of degree k [3]. In this paper we find the vertex polynomial of well known graphs and newly constructed graphs. The newly constructed graphs are slope graph, New Star graph, Tree related graph, New Two star graph, Plateau graph, Up and down graph, Esakison graph, Quadrilateral push graph, Fan tailed graph, Bipartite tailed graph, Bipartite triangulated graph, Three Star graph, Coque graph, Bipartite pend graph, Bipartite slide graph, Bipartite tail and push graph and Bipartite with ray graph.

Key Words : *Maximum degree, Ladder graph, Friendship graph, Wheel graph, Gear graph, Book graph, Helm graph, Web graph, Lattice graph, Crown graph, Banana tree graph, Lollipop graph etc.*

2010 AMS Subject Classification : 05cxx.