



YMC 2006



Young Mathematicians Conference 2006

August 4th-6th at The Ohio State University.

A FAMILY OF GRAPHS COMING FROM THE SYMMETRIES OF THE CUBE.

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Abstract of Report Talk: A group G acting on a set is called a G -set. A G -set together with a list of elements in G gives a directed graph, which I call an action graph; Cayley graphs are a special case. This talk will explore all action graphs for a fixed group, the symmetric group S_4 , and the relationships between these action graphs and the characteristic polynomials of their adjacency matrices. Applications include the symmetries of the cube, Burnside-Polya counting, and a taxonomy of orbits and stabilizers. [CJ13110649]

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Received: July 21, 2006