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Monson, Pisanski, Schulte and Weiss* (weiss@yorku.ca), Department of Mathematics and Statistics, York University, Toronto, Ontario M3J 1P3, Canada. *Gray graph as a medial layer graph of a polytope.*

Each combinatorial polytope of type 3,6,3 yields a bipartite 3-valent graph, called medial layer graph of the polytope, whose vertices are the faces of the polytope of ranks 1 and 2. Two vertices of such graph are adjacent whenever the corresponding faces are incident. We give a construction of an infinite family of edge transitive graphs that are not vertex transitive. The smallest member of the family is the graph on 54 vertices known as the Gray graph. (Received February 17, 2006)