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FINITE ALMOST SIMPLE 4-PRIMARY GROUPS WITH CONNECTED GRUENBERG–KEGEL GRAPH

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Let G be a finite group. Denote by $\pi(G)$ the set of prime divisors of the order of G. The Gruenberg–Kegel graph (prime graph) of G is the graph with the vertex set $\pi(G)$ in which two different vertices p and q are adjacent if and only if G has an element of order pq. If $|\pi(G)| = n$, then the group G is called n-primary. In 2011, A.S. Kondrat'ev and I.V. Khramtsov described finite almost simple 4-primary groups with disconnected Gruenberg–Kegel graph. In the present paper we describe finite almost simple 4-primary groups with connected Gruenberg–Kegel graph. For each of these groups, its Gruenberg–Kegel graph is found. The results are presented in a table. According to the table, there are 32 such groups. The results are obtained with the use of the computer system GAP.

Keywords: finite group, almost simple group, 4-primary group, Gruenberg–Kegel graph.

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