

عنوان مقاله:

Quasirecognition by prime graph of $U_3(q)$ where $2 < q = p^{\alpha} < 100$

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تعداد صفحات اصل مقاله: 16

نویسندگان:

Seyed Sadegh Salehi Amiri - Islamic Azad University

Alireza Khalili Asboei - Islamic Azad University

Ali Iranmanesh - Tarbiat Modares University

Abolfazl Tehranian - Islamic Azad University

خلاصه مقاله:

Let G be a finite group and let $\Gamma(G)$ be the prime graph of G . Assume $2 < q = p^{\alpha} < 100$. We determine finite groups G such that $\Gamma(G) = \Gamma(U_3(q))$ and prove that if $q \neq 3, 5, 9, 17$, then $U_3(q)$ is quasirecognizable by prime graph, i.e. if G is a finite group with the same prime graph as the finite simple group $U_3(q)$, then G has a unique non-Abelian composition factor isomorphic to $U_3(q)$. As a consequence of our results, we prove that the simple groups $U_3(8)$ and $U_3(11)$ are \mathcal{F} -recognizable and \mathcal{F} -recognizable by prime graph, respectively. In fact, the group $U_3(8)$ is the first example which is a \mathcal{F} -recognizable by prime graph

کلمات کلیدی:

prime graph, Element order, simple group, linear group

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