

The large sum graph related to comultiplication modules

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Let R be a commutative ring and M be an R -module. We define the large sum graph, denoted by $\acute{G}(M)$, as a graph with the vertex set of non-large submodules of M and two distinct vertices are adjacent if and only if $N + K$ is a non-large submodule of M . In this article, we investigate the connection between the graph-theoretic properties of $\acute{G}(M)$ and algebraic properties of M when M is a comultiplication R -module.¹

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