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 \( \hat{G}(M) \), 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 \( \hat{G}(M) \) and algebraic properties of \( M \) when \( M \) is a comultiplication \( R \)-module.\(^1\)

References


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