

C_2 -cofiniteness of 2-cyclic permutation orbifold models

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In this article, we consider permutation orbifold models of C_2 -cofinite vertex operator algebras of CFT type. We show the C_2 -cofiniteness of the 2-cyclic permutation orbifold model $(V \otimes V)^{\Lambda}$ for an arbitrary C_2 -cofinite simple vertex operator algebra V of CFT type. We also give a proof of the C_2 -cofiniteness of a Z_2 -orbifold model V_{L^+} of the lattice vertex operator algebra V_L associated with a rank one positive definite even lattice L by using our result and the C_2 -cofiniteness of V_L .

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