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On classification of (weakly integral) modular categories by dimension.

We look at classing strictly weakly integral modular categories of dimension $4q^2$ and 2^5 . Motivation to classify these categories comes from their importance in various fields of mathematics, including topological quantum field theory, conformal field theory, representation theory of quantum groups, vertex operator algebras and applications in physics. To classify these categories we look at the possible number of invertible object and then look at the trivial component \mathcal{C}_{ad} . From there we can look at the cases for the non-integral component and classify the possibilities. (Received September 26, 2017)