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David Penneys*, 100 Math Tower, 231 West 18th Ave., Columbus, OH 43210-1174. *The module embedding theorem.*

By Cayley's theorem, a G -module X for a group G is equivalent to a homomorphism from G into the set of bijections of X . The tensor category analog is that a C -module structure on a category M is equivalent to a tensor functor from C into $\text{End}(M)$, the endofunctors of M . We will explain the pivotal, unitary, and unitary pivotal analogs of this fact, as well as a generalization to multitensor categories. We will then explain that one such analog is the module embedding theorem for finite depth subfactor planar algebras, which was recently used to construct the Extended Haagerup fusion categories. (Received September 20, 2018)