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A note on equivalent definitions of Carboni modularity

There are several known equivalent definitions of what A. Carboni [2] called a modular category, each involving two conditions of independent interest. We compare these conditions in various ways. In particular, we show that one of the characterizations of Carboni modular categories, which was obtained in [1], can be formulated in a way similar to the characterization of lextensive categories as categories with finite limits and finite coproducts whose plus functors are equivalences. This shows a new way to see the analogy between modularity and lextensivity emphasized in [2].

REFERENCES:

- [1] D. Bourn, Normalization equivalence, kernel equivalence and affine categories, Lecture Notes in Mathematics 1488, 1991, 43–62.
- [2] A. Carboni, Categories of affine spaces, Journal of Pure and Applied Algebra 61, 1989, 243–250.

*Joint work with Dominique Bourn.