

Some examples of n -categories

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It is sometimes possible to represent strict n -categories by subcomplexes of abstract cell complexes (or pasting diagrams). These representations are faithful, so that they can be used to decide whether elements of an n -category are equal. They often exist for free n -categories, and therefore provide universal formulae. There is a tensor product of n -categories represented by the cartesian product of cell complexes; for example, cubes represent tensor powers of the free 1-category generated by a single morphism. Tensor products of basic n -categories have rich and elegant structures; I give some results on these structures due to Cui Hongbin and myself.