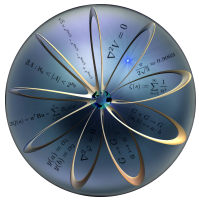

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graded tensor product

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Defines	super tensor product

If A and B are $\mathbb{Z}$-graded algebras, we define the *graded tensor product* (or *super tensor product*) $A \otimes_{su} B$ to be the ordinary tensor product as graded modules, but with multiplication - called the *super product* - defined by

$$(a \otimes b)(a' \otimes b') = (-1)^{(\deg\ b)(\deg\ a')} aa' \otimes bb'$$

where a, a', b, b' are homogeneous. The super tensor product of A and B is itself a graded algebra, as we grade the super tensor product of A and B as follows:

$$(A \otimes_{su} B)^n = \coprod_{p,q\,:\,p+q=n} A^p \otimes B^q$$