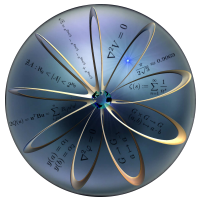

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## non-associative algebra

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A *non-associative algebra* is an algebra in which the assumption of multiplicative associativity is dropped. From this definition, a non-associative algebra does not  that the associativity fails. Rather, it enlarges the class of associative algebras, so that any associative algebra is a non-associative algebra.

In much of the literature concerning non-associative algebras, where the meaning of a "non-associative algebra" is clear, the word "non-associative" is dropped for simplicity and clarity.

Lie algebras and Jordan algebras are two famous examples of non-associative algebras that are not associative.

If we substitute the word "algebra" with "ring" in the above paragraphs, then we arrive at the definition of a *non-associative ring*. Alternatively, a non-associative ring is just a non-associative algebra over the integers.

# References

[1] Richard D. Schafer, *An Introduction to Nonassociative Algebras*, Dover Publications, (1995).