

# This is my fancy article

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**Abstract.** This is a short summary of the contents of this article.

## 1. Preliminaries

All sorts of things are explained and introduced here. Although this is an article, one can also put stuff in fancy boxes. A tasty example:

### Definition 1: Group action

Let  $G$  be a group and  $X$  a set. A mapping  $\alpha : G \times X \rightarrow X$  that satisfies

$$(A1) \quad \alpha(e, x) = x,$$

$$(A2) \quad \alpha(g, \alpha(h, x)) = \alpha(gh, x)$$

for all  $g, h \in G$  and  $x \in X$  is called a *group action* of  $G$  on  $X$ .

**Remark 2.** It is very common that one replaces  $\alpha$  with a dot. Then the two above axioms read as  $e \cdot x = x$  and  $g \cdot (h \cdot x) = (gh) \cdot x$ .  $\diamond$

## 2. Improvements?

Feel free to adapt/polish this template in any way you like. I am happy to discuss ideas and suggestions for general improvement of this template!

## References

- [1] T.W. Hungerford. *Algebra*. Graduate Texts in Mathematics. Springer New York, 2003. ISBN: 9780387905181.

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