CONVENTIONS

0002

Contents

1. Comments

0003 The philosophy behind the conventions used in writing these documents is to choose those conventions that work.

2. Set theory

0004 We use Zermelo-Fraenkel set theory with the axiom of choice. See [Kun83]. We do not use universes (different from SGA4). We do not stress set-theoretic issues, but we make sure everything is correct (of course) and so we do not ignore them either.

3. Categories

0005 A category $\mathcal{C}$ consists of a set of objects and, for each pair of objects, a set of morphisms between them. In other words, it is what is called a "small" category in other texts. We will use "big" categories (categories whose objects form a proper class) as well, but only those that are listed in Categories, Remark 2.2.

4. Algebra

0006 In these notes a ring is a commutative ring with a 1. Hence the category of rings has an initial object $\mathbf{Z}$ and a final object $\{0\}$ (this is the unique ring where $1 = 0$). Modules are assumed unitary. See [Eis95].

5. Notation

055X The natural integers are elements of $\mathbf{N} = \{1, 2, 3, \ldots\}$. The integers are elements of $\mathbf{Z} = \{\ldots, -2, -1, 0, 1, 2, \ldots\}$. The field of rational numbers is denoted $\mathbf{Q}$. The field of real numbers is denoted $\mathbf{R}$. The field of complex numbers is denoted $\mathbf{C}$.

6. Other chapters

References

[Eis95] David Eisenbud, *Commutative algebra*, Graduate Texts in Mathematics, vol. 150, Springer-Verlag, 1995.

[Kun83] Kenneth Kunen, *Set theory*, Elsevier Science, 1983.