own definition.* A better definition would be composed of the two parts†

$$(a = b) \mathrel{\overline{\in}} (a \mathrel{\overline{\in}} b)(b \mathrel{\overline{\in}} a), \quad \text{and} \quad (a \mathrel{\overline{\in}} b)(b \mathrel{\overline{\in}} a) \mathrel{\overline{\in}} (a = b).$$

The equality sign is used however before Axiom III is given. In part two, Aussagentheorie, Funktionen, Gleichen und Ungleichen, the author derives and discusses at length the general formulas for the symbolic sum and product, and the methods of substitutions and reduction of symbolical functions with the methods of elimination and solution of the general symbolical equation. This part is quite extensive and there is much that is obvious.

One good feature of the work, at least from the standpoint of the mathematician, is the numerical or algebraical examples, illustrative of the general theory, used throughout the book. The Abriss on the whole is a very creditable piece of work and cannot but help arouse interest in the algebra of logic. No serious errors occur, but there are some obvious misprints of the type found in line three, page thirteen, where $a$ in the last parenthesis should be $\alpha$.

L. I. NEIKIRK.

*Cours d'Astronomie.* Première partie: *Astronomie théorique.* Par H. ANDOYER. Deuxième édition entièrement refondue. Paris, Librairie scientifique A. Hermann. 383 pp.

THE first edition of this work in hectographed form has been reviewed in volume 13, number 10, of the BULLETIN.‡ The second edition is much enlarged, almost doubled in size. The number of chapters is increased from fifteen to nineteen. The work in its present form is subdivided into four large sections, or books, of which the first is of a more analytical character. The transformation of coordinates with common origin—spherical trigonometry—is given with considerable completeness; to it is added the transformation for different origins and parallel systems of axes—the analytical basis for parallax and aberration. The second book defines the adopted systems of coordinates in astronomy, the concepts of sidereal and solar

* A similar fallacy is evident in axiom VI×. It would be difficult to avoid this in a simple way.

† A combination of his III′, III″ and III‴.

‡ See also the review of the second part, by Professor Longley, BULLETIN, vol. 15, pp. 467–468.