baffled many who thought themselves familiar with homotopy theory. Among its prescriptions, it asks us "Write, following (1.2a), $I^{m+n} = I^m \times I_m^{m+n}, \cdots$." (1.2a) turns out to be (with the misprint corrected)

$$X^{I^n}, A^{\dot{I}^n}, x_0^{J^{n-1}} = X^{I^k \times I_k^n}, A^{\dot{I}^k \times I_k^n \cup I^k \times \dot{I}_k^n}, x_0^{J^{n-1}}.$$

It was some time before the reviewer realized that "following (1.2a)" refers to what *follows* (1.2a) and not (1.2a) itself!

Misprints are excessively numerous. Of particular importance are the following. There are two on p. 7. First the explanation of the symbol a_i^j is flatly contradicted by the instance given; second we have the unenlightening statement that the 0 matrix $\mathbf{0}$ is the square matrix $\mathbf{0} = (0)$. Then on p. 201 the meaning of Definition 4.2 is obscured by having $\langle \boldsymbol{h} \otimes \boldsymbol{g} \rangle$ instead of $\langle h \otimes g \rangle$. On p. 215 a delicate point is lost because in a discussion involving ψ and Ψ, many ψ's appear as Ψ. On p. 412 we can only assume that Lemma 6.4 is a misprint, although we have not reconstructed it (perhaps it would assert that A is a deformation retract of $\Omega(A, Z)$); and on pp. 415, 416, amid other misprints, there occur some highly confusing replacements of X, Y by x, y. The bibliography misspells the names Eckmann, Hirzebruch and Wylie; and the reference to Hopf's paper on group-manifolds has evidently been through an unusually efficient scrambler.

To sum up, the reviewer admires the sweep and coverage achieved by the author; he and the author would have chosen differently from the supply of special topics to illumine the basic material, but that is surely no criticism. The reviewer would have preferred less "general topology" to make room for the cohomology topics listed at the start of this review, but this is just a matter of taste. The reviewer's real disquiet springs from his feeling that the text before him is not yet thoroughly ready for publication and requires substantial emendation and editing along the lines indicated. He trusts that his criticisms may be interpreted in this constructive light and that a new and greatly improved edition of this book may appear.

PETER HILTON

The foundations of intuitionistic mathematics. By Stephen Cole Kleene and Richard Eugene Vesley.

This book consists of four chapters, three by Kleene and one by Vesley. The authors' general purpose is to formalize a portion of intuitionistic analysis and to pursue certain investigations within and certain investigations about the formal system. Such an enterprise, however admirable the mathematics involved, may not be sym-