

2. A. Bruckner and C. Goffman, *Differentiability through change of variables*, Proc. Amer. Math. Soc. **61** (1976), 235–241.
3. R. Fleissner and J. Foran, *Transformations of differentiable functions*, Colloq. Math. **39** (1978), 277–284.
4. V. Jarnik, *Sur les nombres dérivés approximatifs*, Fund. Math. **22** (1934), 4–16.
5. M. Laczko and G. Petruska, *On the transformers of derivatives*, Fund. Math. **100** (1978), 179–199.
6. J. Lipiński, *Une propriété des ensembles $\{f'(x) > a\}$* , Fund. Math. **42** (1955), 339–342.
7. J. Marcinkiewicz, *Sur les nombres dérivés*, Fund. Math. **24** (1935), 305–308.
8. I. Natanson, *Theory of functions of a real variable*, Vol. I, Ungar, New York, 1961.
9. C. Neugebauer, *Darboux functions of Baire class 1 and derivatives*, Proc. Amer. Math. Soc. **13** (1962), 838–843.
10. R. O'Malley, *The set where the approximate derivative is a derivative*, Proc. Amer. Math. Soc. **54** (1976), 122–124.
11. R. O'Malley and C. Weil, *The oscillatory behavior of certain derivatives*, Trans. Amer. Math. Soc. **234** (1977), 467–481.
12. D. Preiss, *On the first derivative of real functions*, Comm. Math. Univ. Carolinae **11** (1974), 817–822.
13. S. Saks, *Theory of the integral*, Monografie Mat., vol. 7, Warszawa, 1937.
14. W. Sierpiński, *Sur une propriété de fonctions quelconques d'une variable réelle*, Fund. Math. **25** (1935), 1–14.
15. C. Weil, *On properties of derivatives*, Trans. Amer. Math. Soc. **114** (1965), 363–376.
16. _____, *On approximate and Peano derivatives*, Proc. Amer. Math. Soc. **20** (1969), 487–490.
17. H. Whitney, *On totally differentiable and smooth functions*, Pacific J. Math. **1** (1951), 143–159.
18. Z. Zahorski, *Sur la première dérivée*, Trans. Amer. Math. Soc. **69** (1950), 1–54.

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Elements of homotopy theory, by George W. Whitehead, Graduate Texts in Math., vol. 61, Springer-Verlag, New York and Berlin, 1978, xxii + 744 pp.

Good news! George Whitehead has completed Volume 1 of the great American encyclopaedic treatise on homotopy-theory.

The approach adopted in this book is well described by the author.

“As the title suggests, this book is concerned with the elementary portion of the subject of homotopy theory. It is assumed that the reader is familiar with the fundamental group and with singular homology theory

“Anyone who has taught a course in algebraic topology is familiar with the fact that a formidable amount of technical machinery must be introduced and mastered before the simplest applications can be made. This phenomenon is also observable in the more advanced parts of the subject. I have attempted to short-circuit it by making maximal use of elementary methods. This approach entails a leisurely exposition in which brevity and perhaps elegance are sacrificed in favour of concreteness and ease of application

“It is a consequence of this approach that the order is to a certain extent historical

“As I have stated, this book has been a mere introduction to the subject of homotopy theory. The rapid development of the subject in recent years has been made possible by more powerful and sophisticated algebraic techniques. I plan to devote a second volume to these developments.”