

mentor, by telling him: “Poincaré said that geometry is the science of correct reasoning from incorrectly drawn figures; for you it is the other way around.”

In the end it doesn't much matter why Ulam shied away from technical mathematics; what matters is that we see him as he was, a very human hero who succeeded in turning a weakness into major strength. Rota's scientific and psychological portrait, suffused with love, pain, understanding, and admiration, succeeds in bringing him to life.

The unusual and unusually beautiful design and artwork, including three portraits of Ulam by Jeff Segler, enhance the value of this volume and the pleasure it gives; the editor, Nicky Cooper, has earned our gratitude.

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Kleinian groups, by Bernard Maskit. Grundlehren der Mathematischen Wissenschaften, vol. 287, Springer-Verlag, Berlin, Heidelberg, New York, 1988, xiii + 326 pp., \$77.50. ISBN 3-540-178746-9

Colleagues and friends of Bernie Maskit can turn to almost any page of his book and immediately recognize his characteristic style. The focus is on that part of the field where his own contributions are most strongly felt. Before turning to the book itself, we will make some general comments.

In the complex analysis we learn early about Möbius transformations; the conformal automorphisms of the (Riemann) 2-sphere; and their classification into elliptic, parabolic, and loxodromic/hyperbolic. Each is the composition of two or four reflections in circles which following Poincaré leads easily to its natural extension to a conformal automorphism of the 3-ball. Besides giving rise to the orientation preserving conformal automorphisms of the ball, this procedure also establishes that the totality of these extensions gives the full group of orientation preserving isometries of hyperbolic 3-space \mathbf{H}^3 .