

when f , A , B and C are bounded and have their discontinuities regularly distributed in the rectangle $0 \leq x \leq a$, $0 \leq y \leq b$. This proof avoids the usual decomposition of the rectangle (a, b) into smaller rectangles. An application to partial differential equations of the hyperbolic type is given.

31. If the power series $f(x) = x + a_2x^2 + \cdots + a_nx^n + \cdots$ is such that $z = f(x)$ defines the conformal representation of the unit circle in the x -plane on a simple region in the z -plane, then, as Koebe has shown, there exist upper and lower boundaries for $|f(x)|$ and $|f'(x)|$ when $|x| = r < 1$, these boundaries being independent of the coefficients of $f(x)$.

Professor Gronwall obtains the following approximations to these boundaries:

$$\frac{2}{9}r < |f(x)| < \frac{3r}{(1-r)^2}, \quad \frac{1}{5} \cdot \frac{1-r}{(1+r)^3} < |f'(x)| < 5 \cdot \frac{1+r}{(1-r)^3}.$$

These approximations are of the correct order of magnitude, as is shown by the example $f(x) = x/(1-x)^2$.

F. N. COLE,
Secretary.

THE WINTER MEETING OF THE SOCIETY AT CHICAGO.

THE thirty-fourth regular meeting of the Chicago Section of the American Mathematical Society was held at the University of Chicago on Monday and Tuesday, December 28-29, 1914, it being the third regular meeting of the Society at Chicago. Eighty persons were in attendance upon the sessions, including the following sixty-four members of the Society:

Professor R. P. Baker, Professor W. H. Bates, Mr. William Betz, Professor G. A. Bliss, Professor Henry Blumberg, Professor Daniel Buchanan, Professor H. E. Buchanan, Dr. Josephine Burns, Professor W. H. Bussey, Professor W. D. Cairns, Professor R. D. Carmichael, Professor A. F. Carpenter, Dr. E. H. Clarke, Professor H. E. Cobb, Professor D. R. Curtiss, Dr. W. W. Denton, Professor L. E. Dickson, Mr. C. R. Dines, Professor L. W. Dowling, Professor Arnold Dresden, Professor Arnold Emch, Professor A. B. Frizell, Dr. M. G. Gaba,