$$ay^2 + by + c = dx^n,$$
$$a(b^2 - 4ac)d \neq 0, \qquad n \geqq 3,$$

has only a finite number of solutions as well as the equation

$$y^2 = ax^n + bx^{n-1} + \cdots + k$$

where, in the latter, the right-hand member has at least three different zeros.

After considering a number of special equations of the form

$$x^n + dy^n = \pm 1$$

where $n = 3$ or 4, Skolem applies the theory of p-adic numbers to the equation

$$N(\alpha x + \beta y + \gamma z) = h$$

where α, β and γ are integers in an algebraic field K of degree n. He finds equations of this type which have only a finite number of solutions for $n = 5$.

We now signalize a problem which seems fundamental in this subject. If we consider the irreducible equation

$$f(x_1, x_2, \cdots, x_k) = c$$

where f is of degree n with integral coefficients and with c integral and also f homogeneous we know from the theory of units in an algebraic field that for $k = n$ and $c = 1$, there exist equations of this type with an infinity of integral solutions. On the other hand, if $k = 2$, $n > 2$, Thue's theorem states that there cannot be more than a finite number of solutions. The question is, how far must k be increased to obtain equations of this type with an infinity of solutions? If $n = 3$, we have $k = 3$.

The arithmetical theory of Hermitian forms is not considered, likewise Waring's theorem. It is not exactly surprising that the latter topic has been omitted, as it would merit a volume in itself.

Skolem has written a very interesting book. It is surprising how much arithmetical meat he has packed into the space he employs.

H. S. VANDIVER

Sur les Fonctions Orthogonales de Plusieurs Variables Complexes, avec les Applications à la Théorie des Fonctions Analytiques. By Stefan Bergman. New York, Interscience Publishers, 1941. 62 pp. $1.50.

This book was to appear as one of the Mémorial des Sciences Mathématiques series, but circumstances were such that the edition reached only the galley proof stage. The book is a photostatic edi-