

converge to a function  $\phi(z)$  analytic in  $S$  and such that  $|\phi(z)| < 1$  for  $z$  in  $S$ . Since the original sequence  $\{p_n(z)\}$  converges by hypothesis in  $R$ , the limit function of the subsequence would necessarily agree with  $f(z)$  in  $R$ . But  $\phi(z)$  could not be identical with  $f(z)$  in  $R$ , for then  $\phi(z)$  would have to equal unity at interior points of  $S$ , namely, at the boundary points of  $R$  which lie interior to  $S$ .

It would appear from this remark that Theorem 1 (and Theorem 2 as well) might admit of extension to an arbitrary finite simply connected region whose complete boundary is also the boundary of an infinite region, and that a modification of the methods used in the proofs of the present paper would serve to establish such an extension. The writer hopes to answer this question in a later paper.

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NOTE ON A SIMPLE TYPE OF ALGEBRA IN WHICH  
THE CANCELLATION LAW OF ADDITION  
DOES NOT HOLD

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1. *Introduction.* I do not imagine that the algebraic system considered in this note can be new, but if it has been overlooked this has probably happened because of its simplicity. However, we shall be most interested here in examining the connection of the system with the foundations of ordinary algebra. As we shall see, the symbols employed have most of the properties of rational integers, the principal exceptions being that they are finite in number and from

$$a + b = a + c$$

we cannot infer  $b = c$  in general.\*

2. *Description of the System.* Suppose we introduce the natural numbers 1, 2, 3, . . . , employing for their use Peano's system

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\* In a system in which we may always infer  $b = c$  under the condition given we shall say the cancellation law holds.