

discussion. In so doing we have dug down to the very roots of geometry and dynamics but we have also touched the branches where the shoots are pushing out. Too much must not be claimed. Yet if the point-set theory is not the sap of the tree, it is at least one of its most indispensable ingredients. The usefulness of any mathematical theory must be determined not by its isolation but by its ability to combine with other theories. In this the point-set theory has shown itself most elastic. Had I more time I would attempt to show you that it offers many of the same advantages as analytical geometry. While strong for analysis and decomposition, it is equally strong on the constructive side. Complex groupings of points are made simple, and the way is thus prepared for new discovery. And above all, in its development the arithmetization of analysis is kept close to geometrical intuition.

In tracing the service of the theory of point-sets in geometry and dynamics, we have found only in part achievement, in part present evolution and promise. But it is precisely because of this mocking incompleteness that I have chosen for my topic today the rôle of the point-set theory in geometry and dynamics, trusting that for you also this will be its lure.

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## AN ENUMERATION OF INTEGRAL ALGEBRAIC POLYNOMIALS.

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THE proof given by Weber\* that the algebraic numbers form a countable set orders them according to the values of a certain function of the coefficients in their defining equations. The present note suggests a more direct enumeration of these equations. The algebraic polynomials  $\sum_{i=0}^n a_i x^{n-i}$  in which all coefficients are natural numbers can be put into one-to-one correspondence with the set of natural numbers by the fol-

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\* Algebra, Bd. II, p. 824.