originality of treatment and entire mastery of this intricate and
difficult subject. The aim of the authors has been to write a
book of moderate size which may be used as the basis of a short
course or as a reference book in connection with a lecture course
on this subject. The book has many praiseworthy features.
Besides being very compact, the reasoning is entirely rigorous
and correct, a point which, in view of the lax methods in vogue,
cannot be too highly commended. The Borel-Lebesgue theorem
on point sets included within intervals or rectangles is employed
to establish uniform continuity and similar properties. We
note as worthy of mention also the following features: the sim­
ple manner of introducing irrational numbers with the corre­
sponding geometrical theory of points on the right line; the
methodical use of the upper and lower bounds of a function for
simplifying proofs, an extended comparison of functions with
regard to magnitude (order, rank) with application to indeter­
minate forms and very general criteria for the convergence of
improper integrals, finally the excellent treatment of integration
which develops a surprising amount of the theory in a very
small compass.

One who has carefully read this little volume will have
acquired not only a goodly supply of facts, but, what is of far
greater importance, familiarity with the exact and rigorous
reasoning which is a sine qua non of further work in higher
analysis.

JAMES PIERPONT.

An Algebra for Secondary Schools. By E. R. HEDRICK.
American Book Company, 1908. x + 421 pp.

It is with pleasure that we welcome this little volume into
the already large family of elementary algebras. In these days
of rapid changes, when so much that is time honored must
make way for the new, there is always room for one more
algebra, provided it is written like Professor Hedrick’s in a
thoroughly modern spirit which seeks to readjust both the
material chosen and the manner of its presentation so as to
satisfy more nearly the needs of the present day.

The book has many features well calculated to win support
among progressive teachers. The style is clear and attractive.
The genial personality of the author cannot be swallowed up
even in a high school algebra. It pervades the whole book
and makes it bright and fresh. Without departing too far
from established usage, he has succeeded in giving several sub-
jects a new aspect. As far as possible dead wood has been cut 
out and live material put in its place. The large number of 
new and attractive problems drawn from everyday life and 
from the elements of mensuration and physics will be greatly 
appreciated by the teacher. Considerable prominence has been 
given to graphical methods. The author has used them very 
effectively in treating proportion and variation, in the solution 
of equations, in establishing the notion of roots and logarithms, 
and even in explaining interpolation in a logarithmic table. 
Graphical methods not only make these subjects clearer and 
more real to the pupil, but will prove of great service to him 
whether he stops study with the high school or not. In the 
appendix some of the more advanced topics are treated as per-
mutations and combinations, the binomial theorem, limits and 
infinite series, irrational and complex numbers.

It needs hardly to be added that the reasoning is sound and 
in accordance with present-day standards. The pupil will have 
no vicious habits of thought to eradicate if he goes on with his 
mathematics. In this connection we may note the emphasis 
the author lays on checking the solution of equations, a point 
too often entirely overlooked.

It is a good sign for the future of mathematics in this 
country when men of the calibre of Professor Hedrick are 
will ing to take time from their own researches to write a work 
of this character. We wish his little book all success.

James Pierpont.

Die Lehre von den geometrischen Verwandtschaften. Erster Band: 
die Verwandtschaften zwischen Gebilden erster Stufe. By 
xxii + 415 pp.

The treatise on geometric transformations, of which the 
present volume is the first part, is estimated to consist of four vol-
umes, the manuscript of which is all in the hands of the printer. 
The others will be published as soon as possible.

While the first volume is concerned with forms of one dimen-
sion, it is not simply a text-book on projective geometry, but 
considers multiple correspondences, general involutions, tri-
linearity, and the problem of homography in two and in three 
dimensions. The first half of the book is concerned with para-
metric representation, anharmonic ratios, perspectivity, linear