

Weingarten in particular, Darboux concludes the volume by determining all triple systems for which the nine quantities H_i, β_{ik} depend on a single variable α ; the result is a system composed exclusively of helicoids having constant total curvature.

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It is an established belief that mathematics like the classics stopped growing long ago. The chemist, biologist, physicist, and other scientists look with complacency at the gigantic strides their branches of learning have taken in the last generation and rather pity their colleagues, the mathematicians. According to them, the golden age of our science dates back two thousand years ago when Euclid, Archimedes, Apollonius and Diophantes flourished. It is true that some time afterwards algebra and trigonometry, analytical geometry and the calculus were invented; they have, however, been long since perfected and mathematicians spend their time teaching this ancient body of facts, improving here and there a small detail and solving ingenious problems which they devise to test each other's skill. How different the real state of affairs is! No science presents a more intensely active and vigorous condition than ours. Indeed the growth of mathematics has been so rapid in the last century, the discoveries and inventions so numerous and their importance so far reaching that it is permitted only to a very few extraordinary minds still to overlook the whole field of mathematics as it stands to-day. One has only to recall a few of the great theories which have sprung up in these later days and the numberless special theories and ramifications they have given rise to. First of all that great leviathan, the function theory, embracing as special topics of limitless extent the theory of elliptic, hyperelliptic, abelian, modular, and automorphic functions not to mention others. Of still younger date is the theory of groups finite and infinite, with their far-reaching applications. We have then the modern theory of invariants, the new theory of algebraic numbers, the non-Euclidian geometry, the theory of algebraic transformations and correspondences, Cantor's theory of multiplicities, the partial