(cf. this BULLETIN, volume 25 (1919), page 449) the following theorem is fundamental: if we designate by a Minkowski surface in R_n a finite surface in space of n dimensions, having as its chief characteristic a center of symmetry toward which it is nowhere convex (cf. l. c. for specific definition), then a Minkowski surface in R_n and of volume $\geqq 2^n$ will contain at least three distinct lattice points (i. e., points whose coordinates are integers) if its center is a lattice point. In order to extend the usefulness of the geometry of numbers, Professor Blichfeldt has amplified this theorem to read as follows: (1) a Minkowski surface in R_n of volume $\geqq 2^n k$ and whose center is a lattice point, must contain more than $k - 1$ distinct pairs of lattice points in addition; (2) a Minkowski surface in R_n which contains k lattice points, its center being one, must have a volume $> (k - n)/n!$, if these k points do not all lie on a linear R_{n-1}. Some applications of this theorem were presented.

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AN IMAGE IN FOUR-DIMENSIONAL LATTICE SPACE OF THE THEORY OF THE ELLIPTIC THETA FUNCTIONS.

BY PROFESSOR E. T. BELL.

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1. In his memoir on "Rotations in space of four dimensions"* Professor Cole defined a system of four mutually orthogonal lineoids *yzw, xzw, xyw, xyz* (which we shall denote by X, Y, Z, W respectively) through a point O, the four lines and six planes determined by these, and with reference to this system found the transformations into itself of a sphere S with center at O. Henceforth we assume the radius of S to be $\sqrt{n}$, where n is an integer > 0. From this system we shall derive an image of the theory of the elliptic theta func-

* *Amer. Jour. of Math.*, vol. 12 (1890), p. 191.