drawing the curve $y = \tan \frac{x}{2}$ and rolling the paper into a cylinder of radius 1, so that the asymptotes coincide.]

(10) The characteristics of all planes which pass through a point are at any instant secants of a circular cubic space curve.

(11) All points of Σ which, in three positions, lie in a line of Σ' form a cubic space curve through the points at infinity on the 3 axes of displacement.

(12) All points of Σ which in 4 positions lie in a plane of Σ' form a cubic surface.

(13) All points of Σ which in 5 positions lie in a plane form a sextic space curve.

(14) There are in general 10 points which in 6 positions lie in a plane.

(15) The points which in 5 positions lie on a sphere form a quartic surface. The centres of the spheres form a quartic in Σ'. In the inverse movement the quartics interchange their rôles.

(16) The points which in 6 positions lie on a sphere form a space curve of order 10.

(17) There are in general 20 points which in 7 positions lie on a sphere.

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THE NEW EDITION OF WEBER'S ALGEBRA.

Lehrbuch der Algebra. By HEINRICH WEBER. Second edition. Braunschweig, Vieweg und Sohn, 1898–99. 8vo. Vol. I, pp. 703. Vol. II, pp. 855.

MOST of the readers of the BULLETIN have been aware that a new edition of Weber's Algebra was in progress. Some time ago the first volume appeared; the work is now complete, the second volume of the new edition having just come out. The many excellencies of this great work have been so generally appreciated that Professor Weber has experienced the very unusual pleasure of seeing a new edition required in less than two years after the publication of the first.

The first question that those who already have purchased the first edition will wish answered is: Are the changes so great as to make it desirable to secure the new edition? To