

1600 when Otho was about 50 years old DeMorgan refers to him in no. 11 as "then an old man."

<sup>22</sup> As DEMORGAN pointed out, the 86 pages of 1 are easily distinguishable by the inferiority of paper and type; the same is true of 2; also the corrected copies may be distinguished from the uncorrected ones in a moment as follows: look at the bottom of page 7, at the running titles of the columns. The uncorrected copy will have as it ought to have Basis Differentia Hypothenusa. But the *corrected* copy will have, as it ought not to have, Hypothenusa Differentia Basis.

### QUERY

32. FRENCH AND RUSSIAN TRANSLATIONS OF A VEGA-BREMIKER TABLE. In RMT 635, reference was made to the Carl Bremiker edition of Vega's *Logarithmisch-Trigonometrisches Handbuch*, first published in 1856. It was also noted that in 1857 an English translation of this edition by W. L. F. FISCHER, and an Italian translation by LUIGI CREMONA, were published. Who were the authors of the French translation of 1857 and of the Russian translation of 1858 also mentioned? The first two translations, as well as the 1857 (second Bremiker) German edition are in the Library of Brown University. In what library may the French or Russian translations be found?

R. C. A.

### QUERIES—REPLIES

41. GIRARD AND SNELL TABLES (Q30, v. 3, p. 451).—ALBERT GIRARD, *Tables des Sinus, Tangentes, & Secantes, selon le Raïd de 100 000 Parties. Avec un traité succinct de la Trigonometrie tant des triangles plans, que spheriques*. The Hague, 1626, 240 pages (unnumbered). 6.8 × 11.8 cm.

An examination of the copy of this book in the Library of Congress revealed that the main table contains natural sines, tangents, and secants in units of  $10^{-5}$  for every sexagesimal minute of the first quadrant, so arranged that the functions of complementary angles appear on facing pages. Each page contains functions for a range of half a degree.

Following this principal table is a section devoted to the statement and illustration of rules for the solution of the four standard cases of oblique plane triangles. Although Girard frequently resorts to the device of dissecting oblique triangles into right triangles, he does state and use the Law of Sines. In addition, he gives in the form of rules both the Law of Tangents and the Law of Cosines,—the latter in a form involving the versed sine.

A brief section dealing with some general theorems relating to plane polygons is followed by a treatment of both right and oblique spherical triangles. The discussion of the solution of oblique spherical triangles is limited to three cases: (i) all angles given; (ii) all sides given; and (iii) two sides and their included angle given.

The author then gives to five significant figures the length of a side of each of the five regular polyhedra when inscribed in a sphere of diameter 100 000. His results for the regular tetrahedron and regular octahedron contain rounding errors.

A more extensive table is included showing the lengths to the nearest integer of the sides of regular  $n$ -gons [ $n = 3(1)24$ ] inscribed in a circle of diameter 200 000. Careful examination showed this table to be entirely free from error.