Widman (or Weideman or Wideman), Johannes | Encyclopedia.com

(*b*. Eger, Bohemia [now Czechoslovakia], *ca*. 1462; *d*. Leipzig, Germany, after 1498)

mathematics.

The little known about Widman's life is based on the records of the University of Leipzig. He was entered in the matriculation register in 1480 as "lohannes Weideman de Egra."[1] He received the bachelor's degree in 1482 and the master's degree in 1485.[2] He then lectured on the fundamentals of arithmetic, on computation on lines, and on algebra, as can be seen from the announcements for and invitations to his courses.[3] widman's algebra lecture of 1486, the first given in Germany, is preserved in a student's notebook.[4] In this lecture he discussed the twenty-four types of equations generally treated by the Cossists and illustrated them with many problems. He employed the Cossist signs for the powers of the unknowns, as well as symbols for plus, minus, and the root.[5] As Widman explicitly stated elsewhere,[6] he considered computation with irrational numbers and polynomials(*De additis et diminutis*)to be part of the subject matter of algebra. He also treated fractions and proportions in order to prepare his students for the study of algebra.

The work for which Widman is best known, *Behend und hüpsch Rechnung uff allen Kauffmanschafften*, appeared in 1489. After the Trent *Algorismus* (1475) and the Bamberg arithmetic books (1482, 1483), it was the first printed arithmetic book in German: and it far surpassed its predecessors in the scope and number of its examples.[7] It also was notable for containing the first appearance in print of the plus and minus signs. Widman dedicated the book to Sigismund Altmann of Schmidtmüheln, who also enrolled at Leipzig in 1480.[8] There are no direct reports of Widman's activities after 1489; his brief mathematical works that were printed later appeared anonymously and without date of publication. Yet, according to Conrad Wimpina, Widman was still working on mathematical topics in 1498.

Widman's knowledge of arithmetic was based on the *Algorismus Ratisbonensis* and the Bamberg arithmetic book of 1483, as can be seen by comparing the problems treated in these works with those in his own. His arithmetic book of 1489 went through several editions until 1526,[9] when it was superseded by those of Köbel, Adam Ries, and others.

Widman learned algebra primarily from a volume of manuscripts he owned (now known as Codex Dresdensis C 80)[10] that later came into the possession of Georg Sturtz of Erfurt, who about 1523 placed it at the disposition of Ries. A compilation of all that was then known about arithmetic and algebra, the volume contained, in particular, a German algebra of 1471 and one in Latin.[11] The Latin algebra, in the margins of which Widman entered further examples of the twenty-four types of equations, was the basis of his algebra lecture of 1486.[12] The lecture also is partially preserved in another Dresden manuscript (C 80‴) and in manuscripts from Munich and Vienna.[13] This manuscript (C 80) was also the source of Widman's writings that were printed at Leipzig about 1495.[14] Ries borrowed problems for his *Coss* from Widman's algebra, but he was not aware of the author's identity.[15] Following the appearance of printed works on algebra by Grammateus, Rudolff, and Stifel at the beginning of the sixteenth century, Widman's writings fell into neglect.

NOTES

1. see G. Erler, *Die Matrikel der Universität Leigzig*, I, 323. widman was a member of the Natio Bavarorum.

2.*Ibid*., II. 228, 289. Master Widman was allowed to live outside the dormitory (*petivit dimissionem burse et obtimuit*).

3. See W. Kaunzner, "Über Jonannes Widmann von Eger." 1 f., 45; and E. Wappler. "Zur Geschichte der deutschen algebra im 15. Jahrhundert." 9 f.; and "Beitrag zur Geschichte der Mathematik," 149. 167.

4. The fee for the lecture was 42 groschen (2 florins). See Kaunzner, *op. cit.*. 45.

5. On the root symbol see Wappler, "Zur Geschichte der deutschen Algebra im 15. Jahrhundert." 13. On the earliest use of the minus sign see Kaunzner, "Deutsche Mathematiker des 15. und 16. Jahrhunderts und ihre Symbolik." 22 f.

6. In Codex Lipsiensis 1470, fol 432. On this point see Kaunzner, "Über Johannes Widmann von Eger," 41.92 f.

7. Widman did not use line reckoning; he did, however, present a thorough treatment of proportions using the traditional terminology.

8. He was Dr. *utriusque juris* and rector in 1504.

9. See D. E. Smith. *Rara arithmetica*, 36 f.

10. Widman knew the Regensburg algebra of 1461, and he took certain problems from it (*Regula dele cose super quartum capitulum*). On this point see M. Curtze, in *Abhandlungen zur Geschichte der Mathematik*, **7** (1895). 72; and Wappler, "Zur Geschichte der deutschen Algebra," 540.

11. A description of Codex Dresdensis C 80 is in Kaunzner, "Über Johannes Widmann von Eger," 27–39.

12. See Codex Lipsiensis 1470, fols, 479–493. On this point see Kaunzner, "Über . . . Widmann . . .," 45.

13. See Kaunzner. "Deutsche Mathematiker des 15. und 16. Jahrhunderts und ihre Symbolik," 21.

14. wappler, "Beitrag zur Geschichte der Mathematik," 167, proposes 1490 as the year of publication. All six treatises have the same format, the same type, and the same size pages and length of lines. They all appeared anonymously, without date and, with one exception (Leipzig), without city. Wimpina (*b*. 1460; enrolled at Leipzig in 1479) enumerated all these works except *Regula falsi*: at the time he made his list the works were commercially available.

15. They are problems that Widman had entered in the margins of Codex Dresdensis C 80. See Wappler, "Zur Geschichte der deutschen Algebra," 541 ff.

BIBLIOGRAPHY

I. Original Works. Widman's *Behend und hüpsch Rechnung uff allen Kauffmanschafften* appeared at Leipzig in 1489. The rest of his works, published anonymously and without city or date, are *Algorithmus integrorum cum probis annexis; Alogrithmus linealis; Algorithmus minutiarum phisicarum; Algorithmus minutiarum vulgarium; Regula falst apud philozophantes augmenti et decrementi appellata*; and *Tractatus proportionum plusquam aureus*. On these latter works, see Klebs (below). 35, 36, 281, 324; Wimpina (below), 50; and Wappler, "Beitrag zur Geschichte der Mathematik" (below).

II. Secondary Literature. See M. Cantor, *Vorlesungen zur Geschichte der Mathematik*. 2nd ed., II (Leipzig; 1913), 228 ff.; M. w.Drobisch, *De Ioanni Widmanni Egeriani compendio arithmeticae mercatorum* (Leipzig; 1840); G. Erler, *Die Matrikel der Universität Leipzig*, 3 vols. (Leipzig, 1895–1902), I, 323; II, 228, 289; W. Kaunzner, "Über Johannes Widmann von Eger. Ein Beitrag zur Geschichte der Rechenkunst im ausgehenden mittelater," *Veröffentlichungen des For schungsinstituts des Deutschen Museums für die Geschichte der Naturwissenschaften und der Technik*, ser. C., no. **4** (1968); and "Deutsche Mathematiker des 15. und 16. Jahrhunderts und ihre Symbolik," *ibid*., ser. A. no. **90** (1971); A. C. Klebs, "Incunabula scientifica et medica," in *Osiris*, **4** (1938), 1–359; D. E. Smith, Rara arithmetica (Boston–London, 1908), 36, 40, 44; E. Wappler, "Zur Geschichte der deutschen Algebra im 15. Jahrhundert," in *Programm Gymnasium Zwickau*(1887), 1–32; "Beitrag zur Geschichte det Mathematik," in *Abhandlungen zur Geschichte der Mathematik*, **5** (1890), 147–169; and "zur Geschichte der deutschen Algebra," *Ibid*., **9** (1899), 537–554; and C. Wimpina. *Scriptorum insignium, qui in celeberrimis praesertim Lipsiensi, Wittembergensi, Francofurdiana ad Viadrum academiis, a fundatione ipsarum usque ad annum Christi MDXV floruerunt centuria, quondam ab J. J. Madero Hannoverano edita, ex mspto autographo emendata, completa, annotationibusque brevibus ornata*, J. F. T. Merzdorf, ed. (Leipzig, 1839), 50 f.

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