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(b. Felsberg, Germany, ca. February 1588; d. Ziegenhain, Germany, 17 March 1652)

mathematics.

After the death of his father in 1591, Bramer was taken as a foster son into the home of his sister and her husband, the court clockmaker Joost Bürgi, in Kassel. His brother-in-law tutored Bramer and awakened his passion for mathematics, which was later combined with his architectural abilities. When Bürgi left Kassel in 1604, Bramer accompanied him to the imperial court at Prague; he returned to Kassel in 1609. In 1612 Landgrave Moritz of Hesse–Kassel appointed Bramer the master builder of the court in Marburg, and he was naturalized there on 16 February 1625. (Since 1620 he had been directing the construction of fortifications at the castle and in the town.) In the same year he was consultant to the count of Solms at the fortress of Rheinfels. From 1630 to 1634, Bramer was in charge of the fortifications in Kassel, and in November 1635 he was appointed princely master builder and treasurer of the important Hessian fortress of Ziegenhain.

In his first publication on the calculation of sines (1614), Bramer's talents are evident. In a work on the vacuum (1617), we can see his wide-ranging interests, but no particular field of concentration. The problem of empty space, which had been under active investigation since classical times, was of special topical interest in the seventeenth century. On this matter Bramer held the views of [Tommaso Campanella](#), the contemporary and follower of Galileo.

The problem of central perspective obtained by means of instruments, which had been taken up by [Leone Battista Alberti](#) in 1435 and for which instruments had been designed by Albrecht Dürer in 1525 and by Bürgi in 1604, was further developed by Bramer in 1630 by means of a device that enabled one to draw accurate geometrical perspectives true to nature. He described his method in his *Trigonometria planorum* (1617). In 1651 Bramer contributed to the completion of the instruments for triangulation with the semicirculus: he used an inclined ruler, in order to determine simultaneously the sighted point and its inclination; the instrument, however, differed little from a similar one described by Leonhard Zubler in 1607. Another form of this instrument was mounted on a calibrated plate to determine angulation; Bramer used this for the solution of planar triangles.

We know very little of Bramer's architectural achievements. From advice he gave in 1618 to Count Christian von Waldeck, we know of a plan for construction of a new church for the city of Wildungen. Although the project was not undertaken because of the Thirty Years' War, it is of special importance because it is one of the earliest plans to introduce central church construction into Protestant German church architecture.

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I. Original Works. *Problema, wie aus bekannt gegebenem sinu eines Grades, Minuten oder Sekunden alle folgenden sinus aufs leichteste zu finden und der canon sinuum zu absolvieren sei* (Marburg, 1614); *Beschreibung und Unterricht, wie allerlei Teilungen zu den mathematischen Instrumenten zu verfertigen, neben dem Gebrauch eines neuen Proportional-Instrumentes* (Marburg, 1615); *Bericht und Gebrauch eines Proportional-Lineals, neben kurzem Unterricht eines Parallel-Instrumentes* (Marburg, 1617); *Kurze Meldung vom Vacuo oder leerem Orte, neben anderen wunderbaren und subtilen Quaestionen, desgleichen Nic. Cusani Dialogus von Waag und Gewicht* (Marburg, 1617); *Trigonometria planorum mechanica oder Unterricht und Beschreibung eines neuen und sehr bequemen geometrischen Instrumentes zu allerhand Abmessung* (Marburg, 1617); *Etlliche geometrische Quaestiones, so mehrerteils bisher nicht üblich gewesen. Solviert und beschrieben* (Marburg, 1618); *Beschreibung eines sehr leichten Perspektiv- und Grundreissenden Instrumentes auf einem Stande: auf Joh. Faulhabers, Ingenieurs zu Ulm, weitere Continuation seines mathematischen Kunstspiegels geordnet* (Kassel, 1630); *Appollonius Cattus oder Kern der ganzen Geometrie*, 3 vols. (Kassel, 1634–1684); *Benjamin Brameri Bericht zu Meister Jobsten seligen geometrischen Triangularinstrument* (Kassel, 1648); *Kurzer Bericht zu einem Semicirculo, damit in allen Triangeln in einer Observation nicht allein die drei latera, sondern auch die drei Winkel eines Triangels zu finden* (Augsburg, 1651); *Von Wasserwerken* (unpub. MS Math. 4°27), National Library, Kassel.

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Benjamin Bramer”, in *Hessenland, Heimatzeitschrift für Kurhessen*, **49** (Marburg, 1938), 82 ff.; Karl Justi, “Das Marburger Schloss,” *Veröffentlichungen der Historischen Kommission für Hessen und Waldeck*, XXI (Marburg, 1942), 94, 98, 105.

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