

GAUSS TO GERLING

February 4, 1844

Göttingen

Translated by Peter Martinson

My dearest friend, some time has passed between your last letter and my reply, because Kästner's Compendium could not immediately be found; this had as double consequence, 1.) that I, as soon as I had obtained that which was needed in order to send you information about π , *hastened* to send such to you, and again did not even look over your letter; 2.) that by the time I sent off the answer, the content of your letter was no longer entirely in my memory. So it goes, that I had forgotten to answer one *other point* of your letter, of which I have been reminded, just today, through a completely fortuitous event.

The title of the book of my old university friend Farkas (i.e. Wolfgang) von Bolyai, Sr., follows literally:

Tentamen juventutem studiosam in elementa matheseos purae, elementaris ac sublimioris, methodo intuitive, evidentialiaque huic propria, introducendi cum Appendice triplici. Auctorer Professore Matheseos et Physices Chemiaeque Publ. Ordinario. Tomus primus. Maros Vsrhelyini 1832. Typis collegii Reformatorum per Josephum et Simeonem Kali de fels Vist. LXVI u. 502 Seiten 8vo; Tomus secundus 1833. XVI u. 400 S. many engravings. I do not find the name of the Author indicated.

The one *appendix* found in the first volume has the title:

Appendix scientiam spatii absolute veram exhibens: a veritate aut falsitate Axiomatis XI Euclidei (a priori haud unquam decidenda) independentem; adjuncta ad casum falsitatis quadratura circuli geometrica. Auctore Johanne Bolyai de eadem) geometrarum in exercitu Caesareo Regio Austriaco Castrensiu capitaneo.

This appendix is specifically on (p. 1-26); however, neither place nor year is given, so I presume that this piece, *which stands on its own*, will not appear by itself, but only as an appendix of the work of the father.

Incidentally, in the last decade, a Russian (Lobatschefsky, privy councilor and professor in Kasan)¹ pursued another path. He calls the non-Euclidean

¹Nikolai Ivanovitch Lobachevski (1793-1856), one of the developers of, not an anti-Euclidean geometry, but a non-Euclidean geometry.

imaginary geometry, Astralgeometry (like your old colleague Schweikart), and has furthermore, in *Russian*, given many very extended treatises (usually in the *Memoirs* of the Kazan University), also parts in special brochures, all of which I believe I own, but the precise reading of them has been postponed until I can again throw myself with leisure into this subject, and until the reading of Russian books becomes still easier for me than it is now. If I do not err, then there is also an essay of Professor Lobatschewsky's, perhaps a translation from the *Memoires*, in Crelle's journal, but I can not put my finger on it this instant.

Please forgive the haste of today's letter, with my wish to, as quickly as possible, make good what my forgetfulness in the past had missed.