

It is hoped that the Integer Cuboid Table will be extended through at least the first 1,000,000,000 integers for the smallest side.

Finally, the perfect cuboid was not found. If it exists, the smallest edge must be greater than 333,750,000.

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1. Richard K. Guy, *Unsolved problems in number theory*, vol. 1, Springer-Verlag, New York, 1981.
2. Maurice Kraitchik, *On certain rational cuboids*, Scripta Math. **11** (1945), 317–326.
3. —, *Théorie des nombres*, Tome 3, Analyse Diophantine et Applications aux Cuboides Rationnels, Gauthier-Villars, Paris, 1947, pp. 122–131.
4. —, *Sur les cuboides rationnels*, Proc. Internat. Congr. Math. 1954, vol. 2, Amsterdam, 1954, pp. 33–34.
5. Jean LaGrange, *Sur le cuboïde entier*, Seminaire DeLange-Pisot-Poitou (Groupe d'étude de Théorie des Nombres), 17ème année, 1975/76, #G1, 5 pages.
6. Mohan Lal and W. J. Blundon, *Solutions of the Diophantine equations $x^2 + y^2 = l^2$, $y^2 + z^2 = m^2$, $z^2 + x^2 = n^2$* , Math. Comp. **20** (1966), 144–147.
7. John Leech, *The location of four squares in an arithmetic progression, with some applications*, Computers in Number Theory (A. Oliver, L. Aitkin, and Brian J. Birch, eds.), Academic Press, London and New York, 1971, pp. 83–98.
8. —, *Five tables relating to rational cuboids*, 46 sheets of computer output, UMT file, University of Stirling, Stirling, Scotland, January 1977; see Math. Comp. **32** (1978), 657–659.
9. —, Table Errata **554**—M. Kraitchik, *Théorie des nombres*, Tome 3, Analyse Diophantine et Applications aux Cuboides Rationnels, Gauthier-Villars, Paris, 1947, pp. 122–131; **555**—M. Kraitchik, *Sur les cuboides rationnels*, Proc. Internat. Congr. Math., 1954, vol. 2, Amsterdam, 1954, pp. 33–34; see Math. Comp. **32** (1978), 661.
10. Daniel Shanks, Corrigenda, M. Lal and W. J. Blundon, *Solutions of the Diophantine Equations $x^2 + y^2 = l^2$, $y^2 + z^2 = m^2$, $z^2 + x^2 = n^2$* , Math. Comp. **20** (1966), 144–147; see Math. Comp. **23** (1969), 219.
11. William Gideon Spohn, Jr., *Table of integral cuboids and their generators*, 4pp+45pp reduced-size computer printout, UMT file, Applied Physics Laboratory, Johns Hopkins University, Laurel, Maryland, 1978; see Math. Comp. **33** (1979), Review **4**, 428–429.
12. —, Table Errata **558**—John Leech, *Five tables related to rational cuboids*, UMT **12**, Math. Comp. **32** (1978), 657–659; see Math. Comp. **33** (1979), 430.

12[11D09].—RANDALL L. RATHBUN & TORBJÖRN GRANLUND, *The Classical Rational Cuboid Table of Maurice Kraitchik*, revised and enlarged, ii+(3-page errata)+135pp., deposited in the UMT file.

Maurice Kraitchik first discussed the problem of certain rational cuboids in 1945, giving a table of 50 cuboids at the end of his article [1]. He had published two years later, in the third volume [2, pp. 122–131] of his *Théorie des Nombres*, 241 rational cuboids of the body type for the odd side less than 1,000,000. He added 16 more new cuboids in 1954 in his addendum [3]. John Leech discusses the errata of Kraitchik's tables, giving a list of misprints and omissions [4].

The present table is a new revision of Maurice Kraitchik's originals, completely corrected for all errors and omissions. It is further expanded by extensive computer search to completely cover all odd sides $< 333,750,000$ of the

body type of rational cuboids that do exist. The new revision has two introduction pages, three pages of corrections to the original tables, and 135 pages of the new, expanded table.

The table lists 36 cuboids per page for a total of 4839 cuboids. Each page (except the last) has two columns of 18 cuboids listed in ascending order of the given odd side. All three sides of the cuboid are given in factored format along with their Pythagorean generators. The introduction explains the relation of the generators with the cuboid sides.

The errata for Kraitchik's original tables agrees with that of John Leech [4], with one noted exception, Entry #34 in Corrections to Tome 3, but is more extensive and thought to be totally complete, giving all misprints, transpositions, errors, and omissions that exist in the originals.

It is hoped by the first author that this table will adequately serve as a suitable revision of Kraitchik's own tables and stimulate further progress upon the rational cuboid problem.

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3. —, *Sur les cuboides rationnels*, Proc. Internat. Congr. Math., 1954, vol. 2, Amsterdam, 1954, pp. 33–34.
4. John Leech, Table Errata 554—M. Kraitchik, *Théorie des nombres*, Tome 3, Analyse Diophantine et Applications aux Cuboides Rationnels, Gauthier-Villars, Paris, 1947, pp. 122–131; 555—M. Kraitchik, *Sur les cuboides rationnels*, Proc. Internat. Congr. Math., 1954, vol. 2, Amsterdam, 1954, pp. 33–34; see Math. Comp. **32** (1978), 661.