

Some materials about the Diophantine problems

$$a/b + b/c + c/a = n$$
 and  $x^3 + y^3 + z^3 = n \times y \times z$ 

Included in the first document is a fair amount of survey material about solving equations like these.

- The paper itself (long!)
- The small solutions (n < 200, |x,y,z| < 10<sup>2</sup>0)
- A Maple-format file of generators and other data
- A set of <u>checking procedures</u> to verify the data using Maple and the Maple-V package "APECS" (sold separately. Batteries not included.)
- I have carried out an analysis of curves needed to extend the range to n=1000. Most of the cases are done; the <u>7 curves which remain</u> are here. (Completing these cases will take a while -- weeks, days, years, centuries, and millenia, using the tools I have!)
- Lists of <u>generators</u> are now availble. Note: no other data sets here on the web have been updated yet. If you would like more details, just ask -- I have a lot of data but they are not all in a very usable form.

The original source of these files (where updates are likely to be kept) is

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http://www.math.niu.edu/~rusin/research-math/abcn/
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Ian Connell's APECS package, which does nearly everything anyone knows an algorithm for on an elliptic curve, can be used to check the computations done here. It runs under Maple but, as far as I know, only through Maple 6. Here's a <u>link to APECS</u>.

Last modified 2003/10/20 by Dave Rusin. Mail: