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October 26, 2000

Two “Most” and two “More Wanted” numbers were factored on Page 84, all by the Number Field Sieve. From the wanted lists mailed with Page 83 on March 22, 2000, NFSNET’ factored the “Most Wanted” number 2,613+, Bob Silverman and CWI factored the “Most Wanted” number 10,191+, and CWI factored the “More Wanted” number 10,217-. From the wanted lists in Update 2.E, mailed on July 20, 2000, B. Dodson, CWI, A. K. Lenstra and Edick factored the “More Wanted” number 5,299-.

Since only one wanted number has been factored since the last wanted lists were issued, no new lists are enclosed.

All numbers published in the second edition have been factored except for many base 2 numbers and two base 10 numbers. The base 10 numbers, 10,197- and 10,194+, are on the Most Wanted list.

CWI means Henk Boender, Stefania Cavallar, Walter Lioen, Peter Montgomery, Herman te Riele and Dik Winter at the Centrum voor Wiskunde en Informatica in Amsterdam. ECMNET means Paul Zimmermann, Torbjörn Granlund, Michel Quercia, Witold Grabysz, Vilmar Trevisan and many helpers who use Granlund’s GMP-ECM program. NFSNET’ means CWI, Bob Silverman, Peter Montgomery, Alex Kruppa, Don Leclair, Ernst Mayer and the volunteer sievers Pierre Abbat, Ricardo Aguilera, Brian Briggs, Gary Clayton, David Crandell, Conrad Curry, Kelly Hall, Philip Heede, Jim Howell, Skip Key, Alex Kruppa, Samuli Larvala, Don Leclair, Ernst Mayer, Thomas Noekleby, Henrik Oluf Olsen, Marcio de Moraes Palmeira, Guillermo Ballester Valor and Paulo Vargas.

There were two new champions for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class. The factorization of 2,613+ set a new record (second place) for the Special Number Field Sieve by size of number factored. The factorization of 10,235- set a new record (second place) for for the General Number Field Sieve by size of number factored. A list of recent champions and the first holes in each table is given on another sheet.

The first holes done on Page 84 are in # 4465, # 4491, and # 4520. The second holes done on Page 84 are in # 4476 and # 4495. The only third hole done on Page 84 is in # 4483. The only fourth hole done on Page 84 is in # 4510. The fifth holes done on Page 84 are in # 4472, # 4482, # 4490, # 4500 and # 4518.

The smallest new factor reported on Page 84 has 34 digits. See # 4484. The largest number factored on Page 84 has 331 digits. See # 4493.

See the URL <http://vamri.xray.ufl.edu/proths/fermat.html> for Wilfrid Keller’s list of all known Fermat factors.

See the URL <http://www.utm.edu/research/primes/largest.html> for Chris Caldwell’s list of all of the largest known Mersenne primes.

If your address changes, please tell me.

Keep the factors coming!

Sam Wagstaff