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Three "Most" and four "More Wanted" numbers from the wanted lists issued with Page 103 were factored on Page 104. Using the Special Number Field Sieve, NFSNET″ factored 5,311− and 5,311+, and R. Silverman factored 6,281−. Also with SNFS, NFSNET″ factored 5,313− and 5,313+, R. Silverman factored 2,1550L, and P. Leyland factored 6,283+.

One "Smaller-but-Needed" number was factored on Page 104. S. Irvine used the General Number Field Sieve to factor 2,2226M.

New wanted lists are enclosed.

CWI means Peter Montgomery, Herman te Riele and Willemien Ekkelkamp at the Centrum voor Wiskunde en Informatica in Amsterdam. ECMNET means Paul Zimmermann, Alex Kruppa, Torbjörn Granlund, Michel Quercia, Witold Grabysz, Vilmar Trevisan and many helpers who use the GMP-ECM program of Kruppa and Zimmermann. NFSNET″ is a group of factorers lead by Don Leclair, Paul Leyland and Richard Wackerbarth and with contributions from many volunteer workers. See their URL http://www.nfsnet.org .

There were no new champions for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class. A list of recent champions is enclosed.

The first holes done on Page 104 are in # 5446, # 5447, # 5448, # 5451, # 5464 and # 5475. The second holes done on Page 104 are in # 5442 and # 5455. No third or fifth holes were done on Page 104. The fourth holes done on Page 104 are in # 5452, # 5457 and # 5472.

The smallest new factor reported on Page 104 has 44 digits. See # 5456. The largest number factored on Page 104 has 330 digits. See # 5481.

See the URL http://www.prothsearch.net/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. No new Mersenne primes have been found since $2^{32,582,657} - 1$.

See the URL http://www.cerias.purdue.edu/homes/ssw/cun/index.html for the online Cunningham book. The full text is available at the AMS web site: http://www.ams.org/online_bks/conm22 .

Please send me any address changes.

Keep the factors coming!

Sam Wagstaff