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Several “Wanted” numbers were factored on Page 95. From the wanted lists issued with Page 94 in August, 2004, NFSNET” factored the “Most Wanted” numbers 11,199–, 6,257+ and 7,233+. all by the Special Number Field Sieve. J. Franke factored the “Most Wanted” numbers 6,251+ and 7,232+, both by the SNFS, and 2,743– by the General Number Field Sieve.

Bob Silverman factored the “More Wanted” numbers 2,1238L and 2,1262L, both by SNFS. CWI factored the “More Wanted” number 12,214+ by SNFS. Geoffrey Reynolds found a 45-digit factor of the “More Wanted” number 2,697+ by the Elliptic Curve Method, leaving a 130-digit composite cofactor. Two days later, K. Aoki found a 46-digit prime factor of the 130-digit cofactor by ECM, completing the factorization of 2,697+.

Four “Smaller-but-Needed” number were factored on Page 95. CWI factored 6,364+ and Sean Irvine factored 2,1173+, 7,310+ and 11,297–, all by the General Number Field Sieve.

New wanted lists are enclosed. They were prepared by J. L. Selfridge.

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 Jeff Gilchrist, Don Leclair, Paul Leyland and Richard Wackerbarth and with contributions from many volunteer workers. See their URL <http://www.nfsnet.org>.

With the factorization of 11,199– in # 5055, all Cunningham numbers $b^n \pm 1$ with exponent $n \leq 200$ have been finished.

There were no new champions for factoring Cunningham numbers on this page.

The first holes done on Page 95 are in # 5034, # 5035 # 5040, # 5055, # 5058, # 5061, # 5063 and # 5069. The only second hole done on Page 95 is in # 5070. The third holes done on Page 95 are in # 5023, # 5024 and # 5044. No fourth or fifth hole was done on Page 95.

The smallest new factor reported on Page 95 has 38 digits. See # 5057. The largest number factored on Page 95 has 382 digits. See # 5037.

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. The largest known Mersenne prime, the forty-first one, is $2^{24036583} - 1$.

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.

If your address changes, please tell me.

Keep the factors coming!

Sam Wagstaff