

Department of Computer Sciences
Purdue University
West Lafayette, IN 47907
September 9, 2013

Six “Most Wanted” numbers from the wanted lists issued with Page 125 were factored on Page 126. Dodson, Womack and mersenneforum factored 2,947– by the Special Number Field Sieve. Ryan Propper factored 10,281–, 10,281+, 5,401+, 6,362+ and 7,332+, also by SNFS.

Nine “More Wanted” numbers from the wanted lists issued with Page 125 were factored on Page 126. Propper factored 2,1874L, 3,589–, 3,589+, 7,334+, 10,283–, 10,284+, 11,269–, 11,271– and 11,269+ by SNFS.

One “Smaller-but-Needed” number was factored on Page 126. Propper factored 5,469+ by SNFS.

New wanted lists are enclosed.

The Base 6 extension has just been added to the regular tables.

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. Mersenneforum is a group with a section interested in factoring. See <http://www.mersenneforum.org>. NFS@Home is a group led by Greg Childers.

There were three new champions for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class. The C202 of 3,745+ split in # 6178 was a new champion (first place) for the General Number Field Sieve. It was pushed into second place when the C207 of 3,706+ was split in # 6196. The P83 of 7,337+ in # 6208 was a new champion (first place) for the Elliptic Curve Method. A list of recent champions is enclosed.

The first holes factored on Page 126 are in # 6179, # 6180, # 6182, # 6184, # 6185, # 6188, # 6190, # 6192, # 6194, # 6195, # 6197, # 6199, # 6200, # 6201, # 6202, # 6205, # 6206, # 6208 and # 6209. The second holes factored on Page 126 are in # 6189, # 6203 and # 6204. The fourth holes factored on Page 126 are in # 6187 and # 6198. No third or fifth holes were factored on Page 126.

The smallest new factor reported on Page 126 has 55 digits. See # 6191. The largest number factored on Page 126 has 327 digits. See # 6183.

See the URL <http://www.prothsearch.net/fermat.html> for Wilfrid Keller’s list of all known Fermat factors. Several new factors were found recently.

No new Mersenne primes have been found since the last page. The current largest known prime is $2^{57885161} - 1$. See the URL <http://primes.utm.edu/primes/> for Chris Caldwell’s database of the largest known primes (updated hourly).

See the URL <http://homes.cerias.purdue.edu/~ssw/cun/index.html> for the online Cunningham book. The full text is available as an ebook at: <http://www.ams.org/publications/ebooks/ebooks>.

Please send me any address changes.

Keep the factors coming!

Sam Wagstaff