Department of Computer Sciences Purdue University West Lafayette, IN 47907 July 27, 2023

Page 144 filled rather quickly because most of the factors reported on it come from the recent table extensions.

Three "Most Wanted" numbers from the wanted lists issued with Page 143 was factored on Page 144. NFS@Home factored 2,1109+, 3,683+ and 5,464+, all by the Special Number Field Sieve.

No "More Wanted" number from the wanted lists issued with Page 143 was factored on Page 144.

Five "Smaller-but-Needed" numbers from the wanted lists issued with Page 143 were factored on Page 144. Batalov factored 12,380+ by the General NFS. Wagstaff factored 6,519- by the SNFS. Balfour factored 12,747M by the SNFS. NFS@Home factored 6,545+ by the GNFS and 6,549+ by the SNFS.

New wanted lists are enclosed.

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. NFS@Home is a group led by Greg Childers.

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.

On Page 144 the last number in Paul Leyland's extension of the 3LM table to 1800 was factored. It was 3,1791L c215 in # 6748.

The first holes factored on Page 144 are in # 6726, # 6738 and # 6747. No second, third, fourth or fifth hole was factored on Page 144.

The smallest new factor reported on Page 144 has 56 digits. See # 6728. The largest number factored on Page 144 has 411 digits. See # 6739.

See the URL http://www.prothsearch.com/fermat.html for a list of all known Fermat factors. Four new factors were found since the last page.

No new Mersenne prime was found since the last page. The current largest known prime is $2^{82589933} - 1$. See the URL http://t5k.org/primes/ for the database of the largest known primes.

See the URL http://homes.cerias.purdue.edu/~ssw/cun/index.html for the online Cunningham book.

Please send me any address changes.

Keep the factors coming!

Sam Wagstaff