

Department of Computer Sciences
Purdue University
West Lafayette, IN 47907
May 21, 2023

Page 143 filled rather quickly because most of the factors reported on it come from the recent table extensions.

One “Most Wanted” number from the old wanted lists issued with Page 141 was factored on Page 143. NFS@Home factored 2,1108+ by the Special Number Field Sieve. No “Most Wanted” number from the new wanted lists issued with Page 142 was factored on Page 143.

One “More Wanted” number from the wanted lists issued with Page 142 was factored on Page 143. NFS@Home factored 2,2222M by the SNFS.

Two “Smaller-but-Needed” numbers from the wanted lists issued with Page 142 were factored on Page 143. Wagstaff factored 5,561+ by the SNFS. Batalov factored 12,777L 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. Mersenneforum is a group with a section interested in factoring. See <http://www.mersenneforum.org>. NFS@Home is a group led by Greg Childers. yoyo@home is a distributed group in Germany.

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.

The only first hole factored on Page 143 is in # 6708. No second, third, fourth or fifth hole was factored on Page 143.

The smallest new factor reported on Page 143 has 52 digits. See # 6714. The largest number factored on Page 143 has 392 digits. See # 6698.

See the URL <http://www.prothsearch.com/fermat.html> for a list of all known Fermat factors. One new factor was 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