Department of Computer Sciences Purdue University West Lafayette, IN 47907 October 8, 2019

Six "Most Wanted" numbers from the wanted lists issued with Page 135 were factored on Page 136. NFS@Home factored 2,1033+, 10,311+, 3,653+, 5,446+, 2,1037+ and 6,401-, all by the Special Number Field Sieve.

Nine "More Wanted" numbers from the wanted lists issued with Page 135 were factored on Page 136. NFS@Home factored 7,367+, 7,367-, 2,2062M, 2,2062L, 2,2066L, 2,2066M, 12,269+, 12,269- and 2,1052+, all by the SNFS.

One "Smaller-but-Needed" number from the wanted lists issued with Page 135 was factored on Page 136. NFS@Home factored 2,2158M by the General NFS.

New wanted lists are enclosed.

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. A list of recent champions is enclosed.

The first holes factored on Page 136 are in # 6485, # 6486, # 6487, # 6488, # 6490, # 6491, # 6492, # 6493, # 6494, # 6495, # 6497, # 6498, # 6499, # 6501, # 6502, # 6503 and # 6510. The only second hole factored on Page 136 is in # 6487. The only third hole factored on Page 136 is in # 6496. The only fourth hole factored on Page 136 is in # 6504 and # 6505. No fifth hole was factored on Page 136.

The smallest new factor reported on Page 136 has 60 digits. See # 6507. The largest number factored on Page 136 has 313 digits. See # 6499.

See the URL http://www.prothsearch.net/fermat.html for a list of all known Fermat factors. Several 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://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.

Please send me any address changes.

Keep the factors coming!

Sam Wagstaff