symmetrical case with $n = 6$. The second was taken from the paper by Brock and Murray, with $n = 3$ and the α_i consisting of two pairs of complex conjugates. Using the full 10-figure capacity of a desk machine, cancellation reduced the accuracy of the results obtained to some four significant figures in the first example and six in the second. The procedure given here should, however, be readily adaptable to electronic digital computers, and the increased capacity of those machines should enable the coefficients $B(k, m, n; h, r)$ to be calculated to any accuracy likely to be required in practice.

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1. W. G. BICKLEY, "Formulae for numerical integration," *Math. Gaz.*, v. 23, 1939, p. 352–359.
2. R. E. GREENWOOD, "Numerical integration for linear sums of exponential functions," *Ann. Math. Statist.* v. 20, 1949, p. 608–611.
3. P. BROCK & F. J. MURRAY, "The use of exponential sums in step by step integration," *MTAC*, v. 6, 1952, p. 63–78 and 138–150.

New Factors of Mersenne Numbers

By Edgar Karst

I have tested for prime factors all the Mersenne numbers $2^p - 1$ corresponding to prime exponents p in the interval $3000 < p < 3500$. The limit of the search for factors was $9p^2$ when no factor was previously known; otherwise the limit was $3p^2$.

The nineteen new prime factors of Mersenne numbers found by this search are displayed in the following table. Factors corresponding to smaller values of p have been listed in a paper by Brillhart and Johnson [1].

p	New factors of $2^p - 1$
3037	145 777
3041	5 565 031
3067	22 063 999
3083	15 914 447
3119	230 807·14 222 641
3121	31 509 617
3167	12 237 289
3181	127 241
3191	40 895 857
3253	46 452 841
3257	4 032 167
3299	19 873 177
3329	665 801·1 005 359·26 225 863
3391	1 519 169
3433	5 952 823·12 688 369

An extensive table by Riesel [2] includes smaller prime factors of Mersenne numbers corresponding to $p = 3037, 3041, 3119, 3121, 3181, 3257, 3299, 3329, 3391$, and 3433 in the preceding table.

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1. JOHN BRILLHART & G. D. JOHNSON, "On the factors of certain Mersenne numbers," *Math. Comp.*, v. 14, 1960, p. 365–369.
2. H. RIESEL, "Mersenne numbers," *MTAC*, v. 12, 1958, p. 207–213.