where

$$(10) \qquad \begin{cases} M_2 = -\mu_2'/\sqrt{(\sigma_2')^2 + 1} \\ M_3 = -\mu_3'/\sqrt{(\sigma_3')^2 + 1} \\ \dfrac{1}{r} = \sqrt{(\sigma_3')^2 + 1} \quad \sqrt{(\sigma_2')^2 + 1}\,. \end{cases}$$

Equation (10) gives the volume under the bivariate normal probability surface with correlation coefficient r. These volumes are tabulated in [1].

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1. NBS Applied Mathematics Series, No. 50, *Tables of the Bivariate Normal Distribution Function and Related Functions*, U. S. Government Printing Office, Washington, D. C. 1959.

The Congruence $2^{p-1} \equiv 1 \pmod{p^2}$ for $p < 100{,}000$

By Sidney Kravitz

Fröberg has previously announced [1] the computation of the Fermat remainders corresponding to all odd primes less than 50,000. His results show that $p = 1093$ and $p = 3511$ are the only solutions of the congruence $2^{p-1} \equiv 1 \pmod{p^2}$ in that range.

The residues of $2^{p-1} \pmod{p^2}$ have been computed for $50{,}000 < p < 100{,}000$ on an IBM 650 system at Picatinny Arsenal. No residue congruent to 1 was found corresponding to a prime in this range.

A copy of the table of residues has been deposited in the Unpublished Mathematical Tables file.

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1. C. E. Fröberg, "Some Computations of Wilson and Fermat Remainders," *MTAC*, v. 12, 1958, p. 281.

Editorial Note: Reference should also be made to:

1. W. Meissner, "Uber die Teilbarkeit von $2^p - 2$ durch das Quadrat der Primzahl $p = 1093$," Akad. d. Wiss, Berlin, *Sitzungsb.*, v. 35, 1913, p. 663–667
2. N. G. W. H. Beeger, "On a new case of the congruence $2^{p-1} \equiv 1 \pmod{p^2}$," *Messenger Math.*, v. 51, 1922, p. 149–150.

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