

- 217.—NILS PIPPING, "Die Goldbachsche Vermutung und der Goldbach-Vinogradowsche Satz," Åbo, Finland, Akad., *Acta Math. Phys.*, v. 11, no. 4, 1938, p. 1-25.

$x$	for $m_x$	read
6944	61	37
10006	149	83
23926	47	17
31004	73	67

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### UNPUBLISHED MATHEMATICAL TABLES

In this issue there is a reference to an unpublished table in RMT 1041.

- 150[F].—D. D. WALL, *Table of Wilson's Quotient*. 11 leaves tabulated from punched cards. Deposited in the UMT FILE.

For each of the 709 primes  $p \leq 5381$  the table gives the least positive remainder on division of  $\{(p-1)! + 1\}/p$  by  $p$ . This remainder is zero for  $p = 5, 13,$  and  $563$ . The table was produced on the IBM Card Programmed Calculator. [See also *MTAC*, v. 5, p. 81, MTE 182.]

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### AUTOMATIC COMPUTING MACHINERY

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#### DISCUSSIONS

#### ASYNCHRONOUS SIGNALS IN DIGITAL COMPUTERS

It is frequently necessary, during the operation of a digital computer, to inject signals from sources that are not synchronized with the computer itself, for example, the manual signals. This operation may be initiated by pressing an appropriate push button. In this discussion, we will not be concerned with such problems as "bounce" of contacts, wavering pressure or the possibility of repeated operation because of completion of computation before the button is released, but only with the fact that the contact is made (or broken) at a random moment with respect to the computer timing pulses or "clock." Probably the most important source of automatically generated signals asynchronous with the computer proper is the input equipment. Whether data are introduced by magnetic tape, punched cards, manual keyboard or other means, it is generally introduced at a much lower rate than transfers within the computer itself and at intervals which do not synchronize with the main "clock."