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25[9].—KATHRYN MILLER, *Solutions of  $\phi(n) = \phi(n + 1)$  for  $1 \leq n \leq 500000$* , De Pauw University, Greencastle, Indiana, 1972. Four-page table deposited in the UMT file.

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There are 56 solutions of the number-theoretic equation

$$(1) \quad \phi(n) = \phi(n + 1)$$

for  $n \leq (1/2) \cdot 10^6$ . A table of these is deposited in the UMT file. For  $n \leq 10^5$ , there are 36 solutions, in agreement with [1].

No new solution of

$$\phi(n) = \phi(n + 1) = \phi(n + 2)$$

exists in this range besides the known example  $n = 5186$ . Except for  $n = 1, 3, 5186$  and 5187 all 56 solutions of (1) have  $n$  or  $n + 1$  divisible by 15 but the next two solutions are

$$n = 525986 = 2 \cdot 181 \cdot 1453, \quad n + 1 = 3^3 \cdot 7 \cdot 11^2 \cdot 23,$$

and

$$n = 546272 = 2^5 \cdot 43 \cdot 397, \quad n + 1 = 3^2 \cdot 7 \cdot 13 \cdot 23 \cdot 29.$$

#### AUTHOR'S SUMMARY

1. M. LAL & P. GILLARD, "On the equation  $\phi(n) = \phi(n + k)$ ," *Math. Comp.*, v. 26, 1972, pp. 579-583.

EDITORIAL NOTE: Equation (1) is necessary but not sufficient for the  $\phi(n)$  residue classes prime to  $n$  to have the same Abelian group under multiplication (mod  $n$ ) that the  $\phi(n + 1)$  classes have (mod  $n + 1$ ). Of the foregoing 58 solutions, isomorphism is present only in these cases:  $n = 1, 3, 15, 104, 495, 975, 22935, 32864, 57584, 131144, \text{ and } 491535$ .

D. S.

Seq N1215.5 = 3276

26[12].—TORGIL EKMAN & CARL-ERIK FRÖBERG, *Introduction to Algol Programming*, Oxford Univ. Press, London, 1972, 2nd ed. First published in Swedish in 1964, iii + 186 pp., 23 cm. Price \$7.95.

Within the hard covers of this 186-page book, there is a concise description of the background and historical development of the ALGOL language, together with a well-arranged comprehensive methodical treatment of the language itself. At the end of most of the chapters, there are exercises, with answers to the questions supplied at the end of the book.

There is not one superfluous word in this text which reads rather well though, at times, it is a little on the heavy side. The humorous quotations introducing each of the chapters (at least, those written in a language understood by the reviewer) served as a timely relief when the going was a little difficult.

The book is not suitable for novices and neither is it intended to be. It is much more attuned to the undergraduate or graduate student with considerable familiarity with Fortran or PL/I programming, although people in a great many different fields of interest would find the language worthy of attention.

HENRY MULLISH

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Handwritten notes and scribbles in the right margin, including the word "abundant" and other illegible markings.