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<sup>1</sup> Compare D. H. LEHMER, Guide to tables in the theory of numbers. National Research Council, 1941, p. 75-77, O. TAUSSKY, Some computational problems in algebraic number theory. National Bureau of Standards Report (to appear). <sup>2</sup> For theoretical background consult H. HASSE, Arithmetische Bestimmung von Grundein-

heit. Berlin, 1950, p. 70.

<sup>3</sup> These were taken from a table of minimum positive g for p < 3000 in I. M. VINO-GRADOV, Osnovy Teorii Chisel [Fundamentals of the Theory of Numbers]. Moscow, 1940, p. 110.

<sup>4</sup> The case p = 163 was discovered through another procedure by E. ARTIN, according to a private communication.

167.—Cullen NUMBERS. These are numbers of the form  $n2^n + 1$  and are remarkable in that they seem to be composite for n > 1, although there is no a priori reason for this. CUNNINGHAM & WOODALL<sup>1</sup> made a study of these numbers and found them all composite with a small factor for 1 < n < 141. No factor of  $141 \cdot 2^{141} + 1$  is known. I have completely factored the following cases left incomplete by Cunningham. The case n = 46 is due to R. A. LIÉNARD of Lyons.

n	$n2^{n} + 1$	n	$n2^{n} + 1$
33	47.6031230671	42	23 • 43 • 83 • 2250270487
35	37.32502455213	43	3 • 5 • 163 • 2633 • 58752797
37	3 • 5 • 339016085231	45	$11 \cdot 47 \cdot 2437 \cdot 1256655529$
38	32 • 20879 • 55586743	46	$5 \cdot 31 \cdot 47 \cdot 139297 \cdot 3189821$
39	41 • 3433 • 152326961	47	7 • 11 • 43 • 3593 • 556021079
40	41 • 131611 • 8150491	48	7 • 379 • 997 • 5107973329
41	$13 \cdot 43 \cdot 1291 \cdot 124932557$	66	$5^3 \cdot 13 \cdot 67 \cdot 107 \cdot 131 \cdot 8353 \cdot 382030403$

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<sup>1</sup>A. J. C. CUNNINGHAM & H. J. WOODALL, "Factorisation of  $Q = (2^q \mp q)$  and  $(q \cdot 2^q \mp 1)$ ," Messenger Math., v. 47, 1917, p. 1-38.

## CORRIGENDA

V. 6, p. 225, l. 11, for monomial read elementary. V. 7, p. 34, l. 6, for 6 read 1. V. 7, p. 175, l. 17, for 9 read 8.