A GROUP-THEORETICAL PROOF OF A THEOREM IN ELEMENTARY NUMBER THEORY $c^{N_0} \longrightarrow c^{N_0(2^{\ell-1}+1)}$ $\mathbf{c}^{\mathbf{N}_{0}} \longrightarrow \mathbf{c}^{\mathbf{N}_{0}(2^{\ell} - 1} - 1)$

and

We have thus seen that an automorphism λ of order 2 either leaves a Sylow p₁-subgroup elementwise fixed or takes its elements to their inverses or, in case of the Sylow 2-subgroup of order $2^{\ell} \ge 8$, takes the elements to their $2^{\ell-1} \pm 1$ powers.

Conversely, mappings that act on one Sylow subgroup as above and leave all others elementwise fixed are automorphisms of order 2 and so are their compositions. In fact, let λ be such a mapping,

$$\lambda(\mathbf{c}) = \lambda(\mathbf{c}^{k_0 N_0 + \cdots + k_S N_S}) = \lambda(\mathbf{c}^{k_0 N_0})\lambda(\mathbf{c}^{k_1 N_1}) \cdots \lambda(\mathbf{c}^{k_S N_S}) = (\mathbf{c}^{e_0 k_0 N_0})(\mathbf{c}^{e_1 k_1 N_1})$$
$$\cdots (\mathbf{c}^{e_S k_S N_S}) = \mathbf{c}^{\mathbf{M}}$$

clearly (M, N) = 1 by the lemma and λ is an automorphism of order 2.

Since the group of automorphisms of order 2 is a direct product of the groups of automorphisms of order 2 of its Sylow subgroups, the conclusion of the theorem is established.

REFERENCES

1. W. Burnside, Theory of Groups of Finite Order, Dover, 1955.

2. I. M. Vinogradov, Elements of Number Theory, Dover, 1954.

ERRATA

Please make the following corrections on errors occurring in "The Autobiography of Leonardo Pisano," appearing on page 99, Volume 11, No. 1, February 1973:

Page 100, line 13 — The fourth word in this line should be "quedam," not "quedem."

Page 101, line 11 - Please underline "per qualche giorno."

line 5 from bottom - Please underline the last word, "in."

Page 102, line 6 — Please change the last underscored word from "posta" to "postea." line 21 — Please underline the words "disputationis conflictum."

Page 103, line 1 — Please change the word "reconing" to read "reckoning."

line 20 – Please change the last word on this line to read " ω^2 ."

line 33 — Please change the next to last word to read "3Tq3."

line 5 from bottom – Please read the sixth from last word as " β ."

Page 104, line 1 — Please underline the word "algorismum."

[Continued on page 168.]