which becomes

$$(3.5)\qquad \sum_{\Phi_j,\Psi_r}\prod_{i=1}^{r}\tau(\psi_i)\prod_{j=1}^{u}\tau(\varphi_j)\sum_{L_r} e\Big(\sum_{i=1}^{r}\lambda_i a_i\Big)\prod_{i=1}^{r}\psi_i(-\lambda_i)\prod_{j=1}^{u}\psi_j\Big(\sum_{i=1}^{r}\lambda_i b_{ij}\Big),$$

where $\Psi_r$ ranges over the $r$-tuples $(\psi_1, \ldots, \psi_r)$ of nonprincipal characters such that $\psi_i^{k_i} = \psi_0$ $(i = 1, \ldots, r)$, and $\Phi_u$ ranges over the $u$-tuples $(\varphi_1, \ldots, \varphi_r)$ such that $\varphi_j^{s_j} = \varphi_0$ $(j = 1, \ldots, u)$.

The inner sum of (3.5) is

$$(3.6)\qquad \prod_{i=1}^{r}\psi_i(c_i^{-1})\,T_{r+u}(-c_1^{-1}a_1, -c_2^{-1}a_2, \ldots, -c_r^{-1}a_r, 0, \ldots, 0)$$

where now $c_i = \sum_{j=1}^{u} b_{ij}$ $(i = 1, \ldots, r)$ and $c_i \neq 0$ $(i = 1, \ldots, r)$ by (1.3) and the fact that the $c_i$ are symmetrical in the $b_{ij}$ so that the renumbering is irrelevant. Now the first $r$ terms $-c_i^{-1}a_i$ $(i = 1, \ldots, r)$ are all different, so by Lemma 3,

$$M(r, u) = O(q^{\frac{1}{2}(r+u)+\frac{1}{2}(r+u-1)}) = O(q^{r+u-1/2}) \qquad (0 < r \leqslant h),$$

but

$$M(0, u) = q^u.$$

Hence

$$q^n N = q^{n+t} + \sum_{u=0}^{t-1} O(q^{n+u}) + \sum_{r=1}^{n}\sum_{u=0}^{t} q^{n+t-r-u} O(q^{r+u-1/2}),$$

so that

$$N = q^t + O(q^{t-1/2})$$

as was to be proved.

**References**

[1] L. Carlitz and C. Wells, *The number of solutions of a special system of equations*, Acta Arith. 12 (1966), pp. 77-84.

[2] H. Davenport, *On character sums in finite fields*, Acta Math. 71 (1939), pp. 99-121.

[3] A. Weil, *On the Riemann hypothesis in function fields*, Proc. Nat. Acad. Sci. 27(1941), pp. 97-98.

*Reçu par la Rédaction le 8. 9. 1966*

ACTA ARITHMETICA
XII (1967)

# Corrigendum to the paper "On a theorem of Bauer and some of its applications"

(Acta Arithmetica 11 (1966), pp. 333-344)

by

A. Schinzel (Warszawa)

In Theorem 4 (p. 335) the assumption must be added that the multiplicity of each zero and pole of $g(x)$ is relatively prime to $n/p$. Without this assumption the theorem is false, as the example (1) p. 115 of the paper "Polynomials of certain special types" (these Acta 9 (1964), pp. 107-116) shows.