

The form of the general transformation can be simplified by applying a transformation on ξ_2, ξ_3 , and the cogredient transformation on η_2, η_3 , and similarly a transformation on ξ_4, ξ_5 and one on η_4, η_5 .

7. The argument of Burnside, l. c., §6, page 553, is faulty. It does not show that $\nu = \mu$, but does prove that ν is a multiple of μ . In view of the work of Frobenius and that of Molien, the theorem in question is true.

THE UNIVERSITY OF CHICAGO,
May 12, 1902.

ERRORS IN LEGENDRE'S TABLES OF LINEAR DIVISORS.

BY DR. D. N. LEHMER.

SOME years ago an error in Legendre's Tables of Linear Forms came to my notice. Another was found recently by members of my class, and as this error was left without correction in the later editions I determined to make a careful computation of the whole set. I was surprised to find the list of errors so long. The importance of these tables for many investigations makes it desirable that all these corrections be noted. I have also compared results with the tables in Tshebyshef's *Theorie der Congruenzen*, Berlin, 1889. Most of the errors in Legendre's work have been carried over uncorrected into these tables.

I. Under the form $t^2 - 29u^2$ the form $116x + 3$ should read $116x + 7$. This error was corrected in the fourth edition (1900), which is a copy of the edition of 1830.

II. Under the form $t^2 - 38u^2$ the form $152x + 129$ should read $152x + 131$. Not corrected in the fourth edition nor in Tshebyshef.

III. Under the form $t^2 - 43u^2$ the form $172x + 147$ should read $172x + 137$. Not corrected in the fourth edition nor in Tshebyshef.

IV. Under $t^2 - 51u^2$ there are two forms $204x + 13$. The second of these should read $204x + 31$. This error is in the fourth edition but not in the first (1797).

V. Under $t^2 - 61u^2$ there are so many errors that I will give the correct list: $244x + 1, 3, 5, 9, 13, 15, 19, 25, 27, 39, 41, 45, 47, 49, 57, 65, 73, 75, 77, 81, 83, 95, 97, 103, 107, 109, 113, 117, 119, 121, 123, 125, 127, 131, 135, 137, 141, 147, 149, 161, 163, 167, 169, 171, 179, 187, 195, 197, 199, 203, 205, 217, 219, 225, 229, 231, 235, 239, 241, 243$. The

numerous errors in this list appear in the first and fourth editions, but are corrected in Tshebyshef.

VI. Under $t^2 - 62u^2$ the form $248x + 103$ should read $248x + 107$. Not corrected in the fourth edition nor in Tshebyshef.

VII. Under $t^2 - 73u^2$ the form $292x + 99$ should read $292x + 69$. This error does not occur in the first edition.

VIII. Under $t^2 - 77u^2$ there are two forms $308x + 53$. The second of the two should be replaced by $308x + 137$. There are also two forms $308x + 255$. The second should be replaced by $308x + 171$. These errors appear in the first and fourth editions, but are corrected in Tshebyshef.

IX. Under $t^2 + 61u^2$ the form $244x + 215$ is omitted in the fourth edition and also in Tshebyshef. This error is not in the first edition.

X. Under the form $t^2 + 77u^2$ there are a number of errors. In the first edition the incorrect forms $308x + 89$, $308x + 149$ and $308x + 257$ appear, and the form $308x + 113$ is repeated. In the fourth edition the corrections $308x + 61$, $308x + 101$, $308x + 153$, $308x + 297$ and $308x + 119$ are made. These corrections are right except the last two which should read $308x + 237$ and $308x + 159$. Tshebyshef is equally unfortunate in his correction of this list. He brings in the incorrect forms $308x + 119$ and $308x + 143$, and omits the correct form $308x + 237$. His list thus contains one too many forms.

XI. Under the form $t^2 + 101u^2$ the forms $404x + 305$, $404x + 313$, $404x + 321$ and $404x + 329$ should be replaced by the forms $404x + 309$, $404x + 317$, $404x + 325$ and $404x + 333$. These errors are in all the tables.

XII. Under the form $t^2 + 91u^2$ the form $182x + 7$ should read $182x + 115$. Occurs in all the tables.

XIII. Under the form $t^2 + 74u^2$ the form $296x + 299$ is used instead of the equivalent simpler form $296x + 3$. This error is noted in the list of errata in the first edition and does not appear elsewhere.

BERKELEY, CALIFORNIA,
April, 1902.