

Errata: The Geometry of the Classical Groups

by Donald E. Taylor

Page	Line	
20	-1	change ‘Theorem 4.4’ to ‘Theorem 4.3’
21	1	In Theorem 4.2 (ii) and (iii), the transformations are transvections.
24	11	insert missing full stop.
32	13	change ‘to to’ to ‘to’
33	-9	change ‘ $x, y \in G$ ’ to ‘ $x \in X, y \in Y$ ’
37	-9	change ‘ w_j ’ to ‘ ω_j ’
37	-3	change ‘ $nX_i n^{-1} = X_{\pi(i)}$ ’ to ‘ $nX_{i,j} n^{-1} = X_{\pi(i), \pi(j)}$ ’
37	-2	change ‘ π ’ to ‘ π^{-1} ’
38	2	change ‘ π ’ to ‘ π^{-1} ’
42	9	change ‘ p -subgroup of G ’ to ‘ p -subgroup P of G ’
43	-11	change ‘Theorem 6.2’ to ‘Theorem 6.1’
47	20	change ‘ U_{a+b} ’ to ‘ u_{a+b} ’
48	-14	change ‘ $z \mapsto z^{-1}$ ’ to ‘ $z \mapsto -z^{-1}$ ’
52	8	change ‘for all u, u_1, \dots ’ to ‘for all u, v, u_1, \dots ’
53	-11	insert ‘for all $a \in K$ ’
53	-2	change ‘ $\hat{\beta}(u, v) := \beta(v, u)b$ ’ to ‘ $\hat{\beta}(u, v) := \beta(u, v)b$ ’
54	10	change ‘is odd’ to ‘is not two’
56	14	change ‘ U and V ’ to ‘ U and W ’
57	12	change ‘Exercise 2.12’ to ‘Exercise 2.18’
57	21	change ‘ $f'^{-1}f$ ’ to ‘ $g'^{-1}f$ ’
57	-9	begin new paragraph with ‘If $U \not\subseteq P^\perp$ ’
62	5	change ‘supspaces’ to ‘subspaces’
63	21	change ‘Theorem 5.3’ to ‘Theorem 5.2’
66	11	change ‘ τ -linear’ to ‘ τ -semilinear’
93	-7	insert missing full stop.
95	4	change Lemma 9.25 and its proof to 9.25 Lemma. <i>The expression $w := r_1 r_2 \cdots r_k$ is reduced if and only if the t_i are distinct, in which case $D(w) = \{t_1, t_2, \dots, t_k\}$.</i> Proof. It follows from (9.24) that $ D(w) \leq \ell(w)$ and hence if $r_1 r_2 \cdots r_k$ is not reduced, the t_i are not distinct. On the other hand, if $t_i = t_j$ for some $i < j$ then $w = r_1 \cdots r_{i-1} r_{i+1} \cdots r_{j-1} r_{j+1} \cdots r_k$ and so $r_1 r_2 \cdots r_k$ is not reduced. □
96	3	change ‘(9.20)’ to ‘(9.22)’
96	4	insert missing full stop.
97	6	insert missing full stop.
105	5	should be ‘... any two varieties x and y of Γ ...’
105	20	change ‘ $k \in I$ ’ to ‘ $k \in I \setminus \{j\}$ ’
105	22	change ‘ $\{i, j\}$ ’ to ‘ $\{k, j\}$ ’

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106	11	change ‘the the’ to ‘the’
116	16	change ‘Since $-b\beta(u, u) \in \mathbb{F}_0$, it follows from Lemma 10.1 (iv) that there exists $a \in \mathbb{F}$ such that $u + av$ is isotropic.’ to ‘Since $-b^{-1}\beta(u, u) \in \mathbb{F}_0$ and the norm map is onto, either u is isotropic or there exists $a \in \mathbb{F}^\times$ such that $u + av$ is isotropic.’
118	7	change ‘ q^{2n-5} ’ to ‘ q^{2n-7} ’
118	3–6	change ‘ $e_1, e_2 \dots$ ’ to ‘ e_1, f_1, \dots ’
119	–8	change ‘ $ad - bc = 1$ ’ to ‘ $ad + bc = 1$ ’
119	–7	change ‘ $s \in \mathbb{F}$ ’ to ‘ $s \in \mathbb{F}^\times$ ’
123	15	change ‘(1973)’ to ‘(1972)’
130	–2	change ‘stabilzer’ to ‘stabilizer’
131	6	change ‘Theorem 8.9’ to ‘of Theorem 8.12’
133	13	change ‘the the’ to ‘the’
134	–4	change ‘ $f \mapsto f^\perp$ ’ to ‘ $\hat{\pi} : f \mapsto f^\perp$ ’
135	2	change ‘ $\langle X, X_\pi \rangle$ ’ to ‘ $\langle X, \hat{\pi}(X) \rangle$ ’
135	16	change ‘restriction’ to ‘restrictions’
137	18	change ‘ $\Omega(V)$ ’ to ‘ $P\Omega(V)$ ’
142	–4	change ‘ $z \mapsto z^{-1}$ ’ to ‘ $z \mapsto -z^{-1}$ ’
145	4	change ‘ $= \beta(f^k(u), (f - \mathbf{1})v)$ ’ to ‘ $= \beta(f^k(u), (f - \mathbf{1})^k v)$ ’
146	7	change ‘ $(\mathbf{1}t)f$ ’ to ‘ $(\mathbf{1} - t)f$ ’
148	7	change ‘ $x \mapsto a\beta(x, v)u - \dots$ ’ to ‘ $x \mapsto x + a\beta(x, v)u - \dots$ ’
149	3	add ‘for all $a \in \mathbb{F}^\times$ ’
150	8	change ‘ $Q(u) - v$ ’ to ‘ $Q(v)u - v$ ’
153	11	remove space before the comma.
153	–13	change ‘ $v \in [V, f]$ ’ to ‘ $u \in [V, f]$ ’
154	12	change ‘ $u, v \in I$ ’ to ‘ $u, v \in [V, f]$ ’
154	16	change ‘ $\chi_{gfg^{-1}}(u, v) = \chi_f(g(u), g(v))$ ’ to ‘ $\chi_{gfg^{-1}}(g(u), g(v)) = \chi_f(u, v)$ ’
155	6	change ‘of χ ’ to ‘of χ_f ’
155	–2	change ‘ $(\mathbf{1} - \rho_{u,v})^3 = \mathbf{1}$ ’ to ‘ $(\mathbf{1} - \rho_{u,v})^3 = 0$ ’
155	–1	change ‘ $(\mathbf{1} - \rho_{u,v})^2 = \mathbf{1}$ ’ to ‘ $(\mathbf{1} - \rho_{u,v})^2 = 0$ ’
156	14	change ‘ $[v, f_u] = I_u$ ’ to ‘ $[V, f_u] = I_u$ ’
156	16	change ‘nilpotent’ to ‘unipotent’
159	8	change ‘show’ to ‘shown’
159	8	change ‘ $\dim[V, f] = 2r$ ’ to ‘ $\dim V = 2r$ ’
159	10	change ‘is singular and $\dim[V, f] = 2r$ ’ to ‘is totally singular and $\dim V = 2r$ ’
170	7	change ‘Lemma 9.1’ to ‘Theorem 9.1’
170	–11	change ‘ $t(E) = F, \dots$ ’ to ‘ $t(E) = E$ or E is adjacent to $t(E)$ ’
172	–6	change ‘isotropic’ to ‘singular’
175	–1	add to Exercise 11.10: ‘(v) Use a similar argument to show that $O^-(4, 2) \simeq S_5$ ’

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178	-12	change 'isotropic' to 'singular'
179	-6	change (1963) to (1971)
183	-11	change ' $\sum_S \omega_S(\xi)$ ' to ' $\sum_S a_S \omega_S(\xi)$ '
194	-10	change 'group comprised of the linear transformations of' to 'group of linear transformations in'
197	-1	change 'singular points' to 'singular lines'
205	-4	change (12.50) to (12.49)
208	17	change ' $x \subset V$ ' to ' $x \in V$ '
209	-4	insert 'if $\sigma = 1$ '
211	3	insert '(of Witt index 2)' before 'on V '
211	-9	change ' $q^2 - 2aq + Q(q) = 0$ ' to ' $q^2 - aq + Q(q) = 0$ '
213	19	change 'Algèbre' to 'Algèbre'
217	-2	change '(1973)' to '(1972)'
218	3	insert a reference to R. Ree, On some simple groups defined by Chevalley, <i>Trans. Amer. Math. Soc.</i> 84 (1957), 392-400.
218	-14	change 'aggregation' to 'aggregation'
220	-9	add comma after 'Ringe'
221	22	change ' $\Delta_\pi(V)$ 63' to ' $\Delta_\pi(V)$ 62'
224	6	change '170' to '177'
229	21	change '33' to '32'

Last revised: 9 April 2021