A THEOREM AND AN APPLICATION

Theorem $1 \ 1 = 2$.

Proof: Let a = b. Then $a^2 = ab = b^2$ which gives us $a^2 - ab = a^2 - b^2$. Dividing both sides by a - b, we get a = a + b, i.e. a = a + a. Thus starting with a non-zero a, we see that 1 = 2.

Corollary 2 0 = 1.

Proof: By Theorem 1, 1 = 2. Subtracting 1 from both sides, we get the corollary. \square

An Application

Fields do not exist, since we $0 \neq 1$ in a field.

Commutative Diagrams, Tables, Equations and Arrays:

$$0 \longrightarrow N \xrightarrow{\varphi} R^{2} \xrightarrow{\psi} M \longrightarrow 0$$

$$0 \longrightarrow M^{*} \xrightarrow{\psi^{*}} (R^{2})^{*} \xrightarrow{\varphi^{*}} N^{*}$$

$$K \xrightarrow{\iota} K[X]$$

$$K[X]/I$$

$$x_{\alpha}(t) = \sum_{n=0}^{\infty} \frac{t^{n} (\operatorname{ad} X_{\alpha})^{n}}{n!}.$$

$$f = \begin{pmatrix} a & b & c \\ d & e & f \\ g & h & i \end{pmatrix},$$

$$g(z) = \begin{cases} \overline{f(\overline{z})} & z \in G_{-} \\ f(z) & z \in G_{+} \cup G_{0} \end{cases}$$

$$(1)$$

| Book Store | | |
|------------|----------|------------------|
| | Price | |
| Year | low high | Comments |
| 1971 | 97-245 | Not Bad. |
| 72 | 245-2001 | Not so good this |
| | | year. |

if a normal subgroup
$$N \subset \mathbf{G}(K)$$
 is \mathcal{A} – adically open, (2)

Symbols:

$$\psi \quad \chi \quad \xi \quad l \quad \mp \quad \Longleftrightarrow \quad \div \quad \mathfrak{b} \quad \S$$

 $n \ge 5, n \ge 5,$

Self-defined Macros:

Consider the vectors X_1, \ldots, X_n and f_i, \ldots, f_j .

We get a short exact sequence $0 \to K \xrightarrow{f} M \xrightarrow{g} N \to 0$

Other Stuff:

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$$z \mapsto \frac{\alpha z + \beta}{\gamma z + \delta}, \quad \alpha \delta - \beta \gamma \neq 0,$$

$$\mathbb{P}^1(F_p), \, \pi \colon \tilde{\mathbf{G}} \to \mathbf{G}^{-1}$$

$$|F(K)|$$
 \tilde{G}

in Dickson's own words [5],

$$\delta(\operatorname{diag}(1,\ldots,1,d)) = d[D^*, D^*] SL_m^+(D);$$

It is

E. Cartan $(1936)^2$

$$\mathfrak{g}=\mathfrak{h}\oplus(\oplus_{\alpha\in R}\mathfrak{g}_\alpha)\mathcal{L}$$

the sum (1) End $\mathfrak{g} \otimes_{\mathbb{C}} \mathbb{C}[[t]]$ But as we pointed out in §1, $\bar{\sigma}$ $^{-2}A_n$ §§2.2B-C. $\mid K \mid \geqslant 4$, $^{3,6}D_4$ and 2E_6 .

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$$\Gamma_l = \{ X \in GL_m(\mathbb{Z}_p) \mid X \equiv E_3(\text{mod } p^l) \}$$

$$\Delta(\mathcal{G}) \ (3\frac{1}{2}), \ \left(3\frac{1}{2}\right), \ (3\frac{1}{2})$$

¹We will use bold face to denote algebraic groups.

²Quoted after L. Solomon's review in MR of [C]

Bibliography

- [C] R.W. Carter, Simple groups of Lie type, John Wiley & Sons, London-New York-Sydney, 1972.
- [5] L.E. Dickson, *Linear Groups*, Dover Publications, New York, 1958; 1^{st} edition 1901.