

Chapters 2 and 3

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1 Chapter 2

Important points to remember:

- Let $x_0 \in \mathfrak{h}$ be the unique element given by $\langle \alpha_i, x_0 \rangle = 1$ for all i so that $\langle \phi, x_0 \rangle = o(\phi)$ for all $\phi \in \mathfrak{g}$.
- Let $S_{(i)}(\bar{\mathfrak{b}}) = \bigoplus_{j+k=i} (S_k(\bar{\mathfrak{b}}))_j$ similarly put $U_{(i)}(\bar{\mathfrak{b}}) = \sum_{j+k=i} (U_k(\bar{\mathfrak{b}}))_j$.