For a semisimple linear algebraic group $G \leq \mathrm{GL}(m, \mathbb{C})$ defined over $\mathbb{Q}$, and for a subring R of $\mathbb{C}$, write $G_B = G \cap \mathrm{GL}(m, B)$. A subgroup $\Gamma \leq G_{\mathbb{Q}}$ is **arithmetic** if it is commensurable to $G_{\mathbb{Z}}$.