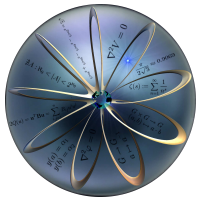

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Borel subgroup

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Let $G = \mathrm{GL}_n\mathbb{C}$, the group of all automorphisms of the n-dimensional vector space over the field of complex numbers $\mathbb{C}$, and $H \leq G$ a subgroup of G. The *standard Borel subgroup* of H is the subgroup of H consisting of all upper triangular matrices (in H). A *Borel subgroup* of H is a conjugate (in H) of the standard Borel subgroup of H.

The notion of a Borel subgroup can be generalized. Let G be a complex semi-simple Lie group. Then any maximal solvable subgroup $B \leq G$ is called a Borel subgroup. All Borel subgroups of a given group are conjugate. Any Borel group is connected and equal to its own normalizer, and contains a unique Cartan subgroup. The intersection of B with a maximal compact subgroup K of G is the maximal torus of K.