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2. Algebra

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Krull Dimension of Malcev-Neumann Rings

It is known that if R is a right noetherian ring, then the corresponding Malcev-Neumann ring $R * ((G))$ is right noetherian and r.K.dim(R) = r.K.dim$(R * ((G)))$. We prove that the right noetherianness is a necessary condition for a Malcev-Neumann ring to have right Krull dimension. Also, we consider uniform dimension of Malcev-Neumann rings. The results obtained are applied to some other ring constructions.

Reference: C. Sonin, Krull Dimension of Malcev-Neumann Rings, *Communications in Algebra,* to appear in 1998.