

# Some Model Theory as a Tool: A Proof of Ax-Grothendieck Theorem

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The Ax-Grothendieck Theorem states that every injective polynomial map  $f : \mathbb{C}^n \rightarrow \mathbb{C}^n$  is surjective. We will see a proof of the theorem by model theoretic approach. In this manner, one of principal theorems of model theory, the Compactness Theorem will be used to get the proof consequently. The aim of this talk is how the model theoretic point of view would effect our approach to mathematics.