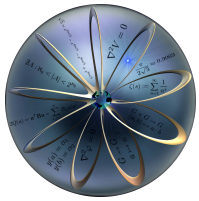

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isomorphism of varieties

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Definition 1. *Let V_1 and V_2 be algebraic varieties. We say that V_1 and V_2 are isomorphic, and write $V_1 \cong V_2$, if there are regular maps*

$$\phi\colon V_1 \to V_2, \quad \psi\colon V_2 \to V_1$$

such that the compositions $\psi \circ \phi$ and $\phi \circ \psi$ are the identity maps on V_1 and V_2 respectively.

Definition 2. *Let V_1 and V_2 be varieties defined over a field K. We say that V_1/K and V_2/K are isomorphic over K if V_1 and V_2 are isomorphic as in Definition 1 and the regular maps ϕ and ψ can be defined over K.*