

$G_k(V)$, because the fiber over each point $S \in G_k(V)$ is S itself.]

5-12. Show that the tautological vector bundle over $G_1(\mathbb{R}^2)$ is isomorphic to the Möbius bundle. (See Problems 5-2, 5-6, and 5-11.)

5-13. Let V_0 be the category whose objects are finite-dimensional real vector spaces and whose morphisms are linear isomorphisms. If \mathcal{F} is a covariant functor from V_0 to itself, for each finite-dimensional vector