Weil — Rashevskiy axiomatic system in analitic geometry and higher algebra

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We consider Weil — Rashevskiy axiomatic system as adapted variant of the point-vector axiomatic system for affine space, which is the basement of the analytic geometry and algebra of finite-dimensional spaces. It gives us an opportunity to obtain strictly proved statements in vector algebra. We give here four groups of axioms and a set of traditionally proved theorems, some of them with proof. A construction of affine manifold (n-dimensional plane) possesses a geometric meaning as the generalization of the line and the plane. In this connection we consider an exercise of reducing a parametric vector equation of n-dimensional plane to matrix equation. Also we discuss the notions of geometrically dependent vector set, convex span, and simplex.

Keywords: *analytic geometry, higher algebra, point-vector axioms, finite-dimensional planes, bariosentrum coodinates.*

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