relation B satisfies five axioms, one of which is Pasch's Law, and the other is a version of Dedekind continuity.

Chapter 3, *Projective transformations* "develops an alternative method of coordinatising a metric affine plane by embedding it into a projective plane, and using the orthogonality relation to define a matrix-representable transformation on the line at infinity. The construction will be central to the subsequent treatment of metric affine spaces of higher dimension."

The investigations conducted by the author in Chapters 3 and 4 show that there exist only two nonsingular metric affine threefolds (Euclidean and Minkowskian spaces) and only three nonsingular metric affine fourfolds (Euclidean, Artian and Minkowskian spaces), if these spaces carry the ternary relation "between." Such spaces are called continuously ordered.

The word "order" occurs in Appendix B "After and the Alexandrov-Zeeman Theorem" for the second time, where the author shows that the notions "between" and "orthogonal" can be defined in terms of the notion of "after", i.e. an ordering which is given on affine space. Hence the method of axiomatization of spacetime based on the orthogonality relation must be considered as part of the program of the construction of causal theory of spacetime which was proposed by A. D. Alexandrov [**1**, **2**].

This book is read with pleasure, and will be useful for the students who are wishing to become geometers.

References

1. A. D. Alexandrov, *Mappings of space with families of cones and space-time transformations*, Ann. Mat. Pura Appl. **53** (1975), 229–257.
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Partially ordered abelian groups with interpolation, by K. R. Goodearl. Mathematical Surveys and Monographs, number 20, American Mathematical Society, Providence, R.I., 1986, xxii + 336 pp., ISBN 0-8218-1520-2

In [**19**], F. Riesz introduced what has come to be called the Riesz decomposition property. An ordered (abelian) group is said to have the Riesz decomposition property if the sum of two order intervals is again an order interval. Riesz showed, among other things, that the cone of positive additive functionals on an ordered group with this property is a lattice. (In the case that the group has an order unit, this says that the compact