

26.4	Projective Frames	868
26.5	Projective Maps	882
26.6	Finding a Homography Between Two Projective Frames	888
26.7	Affine Patches	901
26.8	Projective Completion of an Affine Space	904
26.9	Making Good Use of Hyperplanes at Infinity	909
26.10	The Cross-Ratio	912
26.11	Fixed Points of Homographies and Homologies	916
26.12	Duality in Projective Geometry	930
26.13	Cross-Ratios of Hyperplanes	934
26.14	Complexification of a Real Projective Space	936
26.15	Similarity Structures on a Projective Space	938
26.16	Some Applications of Projective Geometry	947

III The Geometry of Bilinear Forms 953

27 The Cartan–Dieudonné Theorem 955

27.1	The Cartan–Dieudonné Theorem for Linear Isometries	955
27.2	Affine Isometries (Rigid Motions)	967
27.3	Fixed Points of Affine Maps	969
27.4	Affine Isometries and Fixed Points	971
27.5	The Cartan–Dieudonné Theorem for Affine Isometries	977

28 Isometries of Hermitian Spaces 981

28.1	The Cartan–Dieudonné Theorem, Hermitian Case	981
28.2	Affine Isometries (Rigid Motions)	990

29 The Geometry of Bilinear Forms; Witt’s Theorem 995

29.1	Bilinear Forms	995
29.2	Sesquilinear Forms	1003
29.3	Orthogonality	1007
29.4	Adjoint of a Linear Map	1012
29.5	Isometries Associated with Sesquilinear Forms	1014
29.6	Totally Isotropic Subspaces	1018
29.7	Witt Decomposition	1024
29.8	Symplectic Groups	1032
29.9	Orthogonal Groups and the Cartan–Dieudonné Theorem	1036
29.10	Witt’s Theorem	1043