

Classical Geometry

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Part I

Classical geometry

Chapter 1

Euclidean geometry

1.1 Plane geometry

1.2 Solid geometry

1.3 Axiomatization

Chapter 2

Non-Euclidean geometry

2.1 Absolute geometry

axioms 1 to 4

2.2 Spherical and elliptic geometry

axioms 2 and 4

2.3 Hyperbolic geometry

axiomes 1 to 4

Models of hyperbolic geometry Elementary figures Isometries Length, volume, angle

Chapter 3

Non-metric geometry

3.1 Ordered and incidence geometry

axioms 1 and 2

3.2 Affine and projective geometry

axioms 1,2,5

3.3 Conformal and inversive geometry

Part II

Differential geometry of surfaces

Chapter 4

Chapter 5

Uniformization

Part III

Algebraic curves

Part IV

Classification of surfaces