

Download Euclidean And Non Euclidean Geometry Greenberg

In mathematics, non-Euclidean geometry consists of two geometries based on axioms closely related to those specifying Euclidean geometry. As Euclidean geometry lies at the intersection of metric geometry and affine geometry, non-Euclidean geometry arises when either the metric requirement is relaxed, or the parallel postulate is replaced with an alternative one. Non-Euclidean Geometry. In three dimensions, there are three classes of constant curvature geometries. All are based on the first four of Euclid's postulates, but each uses its own version of the parallel postulate. The "flat" geometry of everyday intuition is called Euclidean geometry (or parabolic geometry), and the non-Euclidean geometries are called hyperbolic geometry (or Lobachevsky-Bolyai ... A geometry in which Euclid's fifth postulate holds, sometimes also called parabolic geometry. Two-dimensional Euclidean geometry is called plane geometry, and three-dimensional Euclidean geometry is called solid geometry. Hilbert proved the consistency of Euclidean geometry. In mathematics, hyperbolic geometry (also called Bolyai–Lobachevskian geometry or Lobachevskian geometry) is a non-Euclidean geometry. The parallel postulate of Euclidean geometry is replaced with: . For any given line R and point P not on R , in the plane containing both line R and point P there are at least two distinct lines through P that do not intersect R .