

Comparison Table for Euclidean and non-Euclidian Geometry

	Euclidean	Lobachevskian	Riemannian	
Two distinct lines intersect in	at most one	at most one	two	points
Given line L and point P not on L there exist	one and only one line	at least two lines	no lines	through P parallel to L
A line	is	is	is not	separated into two parts by a point
Parallel lines	are equidistant	are never equidistant	do not exist	
If a line intersects one of two parallel lines, it	must	may or may not	---	intersect the other
The valid Saccheri hypothesis is the	right angle	acute angle	obtuse angle	hypothesis
Two distinct lines perpendicular to the same line	are parallel	are parallel	intersect	
The angle sum of a triangle is	equal to	less than	greater than	180°
Two triangles with equal corresponding angles are	similar	congruent	congruent	