Geometry Conjectures List

<u>Triangle Sum Conjecture</u> – The sum of all the interior angle measures in a triangle is 180°

<u>Isosceles Triangle Conjecture</u> – If a triangle is an isosceles triangle, then the base angles are congruent.

<u>Converse of the Isosceles Triangle Conjecture</u> – If a triangle has two congruent angles, then it is an isosceles triangle.

<u>Triangle Inequalities Conjecture</u> – The sum of any two side lengths in a triangle must always be greater than the remaining side length.

<u>Exterior Angle Conjecture</u> – The sum of the measures of the remote interior angles in a triangle is equal to the measure of the exterior angle.

<u>Side-Angle Inequality Conjecture</u> – In a triangle, if one side is longer than another side, then the angle opposite the longer side will be greater than the angle opposite the shorter side.

<u>Perpendicular Bisector Conjecture</u> – If a point is on the perpendicular bisector of a segment, then it is equal distance from the end points.

<u>Converse of the Perpendicular Bisector Conjecture</u> – If a point is equal distance from the endpoints of a segment, then it is on the perpendicular bisector of a segment.

<u>Angle Bisector Conjecture</u> – If a point is on the bisector of an angle, then it is equal distance from the sides of the angle.

<u>Linear Pair Conjecture</u> – If two angles form a linear pair, then the measures of the angles add up to 180°.

Vertical Angles Conjecture – If two angles are vertical angles, then they are congruent and have equal measures.

Corresponding Angles Conjecture – If two parallel lines are cut by a transversal, then corresponding angles are congruent.

Alternate Interior Angles Conjecture – If two parallel lines are cut by a transversal, then alternate interior angles are congruent.

Alternate Exterior Angles Conjecture – If two parallel lines are cut by a transversal. Then alternate exterior angles are congruent.

Parallel Lines Conjecture – If two parallel lines are cut by a transversal, then corresponding angles are congruent, alternate interior angles are congruent, and alternate exterior angles are congruent.

Converse of the Parallel Lines Conjecture – If two lines are cut by a transversal to form pairs of congruent corresponding angles, congruent alternate interior angles, or congruent alternate exterior angles, then the lines are parallel.