Postulates Theorems and Corollaries

1. Midpoint Theorem   If M is the midpoint of $\overline{AB}$ then $\overline{AM} \cong \overline{MB}$
2. Segment Addition Postulate If *A, B, C* are collinear and *B* is between *A* and *C*, then *AB + BC + AC*.
3. Congruence of segments is reflexive, symmetric and transitive.
4. Angle Addition Postulate If R is in the interior of $\angle$PQS, then
   m$\angle$RQS + m$\angle$PQR = m$\angle$PQS.
5. Complementary angles are two angles with measures that have a sum of 90°.
6. Supplementary angles are two angles with measures that have a sum of 180°.
7. Supplement Thm If two angles form a linear pair, then they are supplementary angles.
8. Complement Thm If the non-common sides of two adjacent angles form a right angle, then the angles are complementary angles.
9. Congruence of angles is reflexive, symmetric and transitive.
10. Angles supplementary to the same angle or to congruent angles are congruent.
11. Angles complementary to the same angle or to congruent angles are congruent.
12. Vertical Angles Thm. If two angles are vertical angles, then they are congruent.
13. Perpendicular lines intersect to form four right angles.
14. All right angles are congruent.
15. Perpendicular lines form congruent adjacent angles.
16. If two angles are congruent and supplementary, then each angle is a right angle.
17. If two congruent angles form a linear pair, then they are right angles.
18. Any segment, line or plane that intersects a segment midpoint is called a segment bisector.
19. Angles that have the same measure are congruent.
20. A ray that divides an angle into two congruent angles is called an angle bisector.

Segment Congruence

Reflexive Property	$\overline{AB} \cong \overline{AB}$
Symmetric Property	If , $\overline{AB} \cong \overline{CD}$ then $\overline{CD} \cong \overline{AB}$
Transitive Property	If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$ then $\overline{AB} \cong \overline{EF}$

Angle Congruence

Reflexive Property	$\angle 1 \cong \angle 1$
Symmetric Property	If $\angle 1 \cong \angle 2$, then $\angle 2 \cong \angle 1$
Transitivie Property	If $\angle 1 \cong \angle 2$, and $\angle 2 \cong \angle 3$, then $\angle 1 \cong \angle 3$

Properties of Real Numbers

Reflexive Property	$a = a$
Symmetric Property	If $a = b$, then $b = a$.
Transitive Property	If $a = b$, and $b = c$, then $a = c$.
Addition and Subtraction Properties	If $a = b$ then $a + c = b + c$, and $a - c = b - c$.
Multiplication and Division Properties	If $a = b$ then $a \bullet c = b \bullet c$, and If $c \neq 0$, then $\dfrac{a}{c} = \dfrac{b}{c}$
Substitution Property	If $a = b$, then a may be replaced by b in any equation or expression
Distributive Property	$a(b + c) = ab + ac$