## Proofs Reference

| Properties of Equality |  | Properties of Congruence |
| :---: | :---: | :---: |
| Addition Property Subtraction Property Division Property" Multiplication Property Distributive Property | Substitution Property Refelxive Property Symmetric Property Transitive Property | Refelxive Property <br> Symmetric Property <br> Transitive Property |
| Definitions |  |  |
| Definition of Congruence | $A B=B C \Leftrightarrow \overline{A B} \cong \overline{B C}$ |  |
| Definition of Bisects | Divides a segment or angle into two congruent parts. |  |
| Defintion of Midpoint | Divides a segment into two congruent segments |  |
| Definition of Complementary Angles | Completementary $\Leftrightarrow$ Sum $90^{\circ}$ |  |
| Definition fo Supplementary Angles | Supplementary $\Leftrightarrow$ Sum $180^{\circ}$ |  |
| Definition fo Perpendicular | Perpendicular lines intersect at right angles. |  |
| Definition of a Right Angle | A right angle $=90^{\circ}$ |  |
| Postulates |  |  |
| AngleAddition <br> Postulate |  | $m \angle A B D+m \angle D B C=\angle A B C$ |
| SegmentAddition Postulate |  |  |
| Linear Pair Postulate | If two angles form a linear pair, then they are supplementary. |  |
| Theorems |  |  |
| Vertical Angle Theorem | If two angles are vertical, then they are congruent. |  |
| All RightAngles Theorem | All right angles are congruent. |  |

