|  |  |
| --- | --- |
| Addition property | If a=b, then a+c=b+c |
| Subtraction Property | If a=b, then a-c=b-c |
| Multiplication Property | If a=b, then a\*c=b\*c |
| Division Property | ^ |
| Reflexive Property | a=a |
| Symmetric Property | If a=b, then b=a |
| Transitive Property | If a=b, and b=c, then a=c |
| Substitution Property | If a=b, b can replace a in any expression |
|  |  |
| Vertical Angles Thm | Vertical angles are congruent |
| Congruent Supplements Thm |  |
| Congruent Complements Thm | Check Page 407…. |
| Right angles are congruent | If <1 and <2 are right angles, they are congruent |
| 2 Congruent angles that are supplementary are right angles |  |
| Parallel | Lines that are coplanar and do not intersect |
| Skew lines | Lines that are noncoplanar, and are not parallel and do not intersect |
|  |  |
| Alternate interior angles | Nonadjacent interior angles that lie on opposite sides of the transversal |
| Same-side interior angles | Interior angles that lie of the same side of the transversal |
| Corresponding angle | Angles on the same side of the transversal and in corresponding positions |
| Alternate exterior angles | Nonadjacent exterior angles that lie on opposite sides of the transversal |
|  |  |
| Same side interior angles postulate | If a transversal intersects 2 parallel lines, then all the interior angles are supplementary |
| Alternate Interior Angles thm | If a transversal intersects 2 parallel lines, then alternate interior angles are congruent |
| Corresponding angles thm | If a transversal intersects 2 parallel lines, then corresponding angles are congruent |
| Alternate Exterior angles thm | If a transversal intersects 2 parallel lines, then alternate exterior angles are congruent |
|  | **These are the “same” as the above just with the “converse”** |
| Converse of the corresponding angles thm | If 2 lines and a transversal form corresponding angles that are congruent, then the lines are parallel |
| Converse of the alt int angles thm | If 2 lines and a transversal form alternate interior angles that are congruent, then the 2 lines are congruent |
| Converse of the same side int angles postulate | If 2 lines and a transversal form same side interior angles that are supplementary, then the 2 lines are parallel |
| Converse of the Alt Ext Angles Thm | If 2 lines and a transversal form alternative exterior angles that are congruent, then the 2 lines are parallel |
|  |  |
| Thm 13 (transitive property) | If 2 lines are parallel to the same line, then they are parallel to each other |
| Thm 14 (Corresponding property) | In a plane, if 2 lines are perpendicular to the same line, then they are parallel to each other. |
| Perpendicular Transversal Thm | In a plane, if a line is perpendicular to one of 2 parallel lines, then it is also perpendicular to the other. |
|  |  |