**Formulas & Proofs Reasons Bank**

Simplifying/Combining like Terms

Distributive Property

Addition/Subtraction Property of Equality

Multiplication/Division Property of Equality

Substitution Property of Equality

Definition of Congruent Angles

Definition of Congruent Segments

Definition of a Right Triangle

Definition of a Right Angle

Definition of Perpendicular

Definition of Midpoint

Definition of Segment Bisector

Definition of Angle Bisector

All right angles are congruent

Reflexive Property

Symmetric Property

Transitive Property

Triangle Sum Theorem

Third Angles Theorem

Definition of Isosceles Triangle

Isosceles Triangle Theorem

Converse of the Isosceles Triangle Theorem

Segment Addition Postulate

Angle Addition Postulate

Definition of a Linear Pair

Linear Pair Postulate (Property)

Definition of Complementary Angles

Definition of Supplementary Angles

Definition of Vertical Angles

Vertical Angles Theorem

Perpendicular Transversal Theorem

Transitive Property of Parallel Lines

Congruent Supplements Theorem

Congruent Complements Theorem

SSS (Side-Side-Side) Triangle Congruence Postulate

SAS (Side-Angle-Side) Triangle Congruence Postulate

ASA (Angle-Side-Angle) Triangle Congruence Postulate

AAS (Angle-Angle-Side) Triangle Congruence Theorem

HL (Hypotenuse-Leg) Triangle Theorem

CPCTC (Corresponding Parts of Congruent Triangles are Congruent)

Converse of the Corresponding Angles Theorem

Converse of the Alternate Interior Angles Theorem

Converse of the Alternate Exterior Angles Theorem

Converse of the Same Side Interior Angles Postulate

Corresponding Angles Theorem

Alternate Interior Angles Theorem

Alternate Exterior Angles Theorem

Same Side Interior Angles Postulate

Definition of Corresponding Angles

Definition of Alternate Interior Angles

Definition of Alternate Exterior Angles

Definition of Same-Side Interior Angles

Sum of the Interior Angles of a Polygon

|  |  |
| --- | --- |
| Rotation of 90 |  |
| Rotation of 180° |  |
| Rotation of 270° |  |
| Rotation of 360° |  y) |