List of Valid Reasons for Proofs

Important Definitions:

Definition of Angle bisector

Definition of Segment bisector

Definition of Midpoint

Definition of Right angle

Definition of Perpendicular

Definition of Congruent

Definition of Complementary angles

Definition of Supplementary angles

Definition of Adjacent Angles

Definition of Parallel Lines

Postulates and Properties:

Addition Property

Subtraction property

Multiplication property

Division property

Addition Property of equality

Subtraction property of equality

Multiplication property of equality

Division property of equality

Distributive property

Substitution property

Transitive property

Symmetric property

Reflexive property

Angle Addition Postulate

Segment Addition Postulate

Translation

Rotation

Reflection

Parallel Postulate

Perpendicular Postulate

Vertical angles are congruent

Linear pair Postulate

Ruler Postulate

Protractor Postulate

Transitive Property of Parallel Lines

Corresponding Angles Postulate

Slope of Parallel Lines

Slope of Perpendicular Lines

Arc Addition

Area of a Square Postulate

Area Congruence Postulate

Area Addition Postulate

Volume of a Cube

Volume Congruence Postulate

Volume Addition Postulate

// Line Angle Relationships:

//, Alternate interior angles are congruent

//, Alternate exterior angles are congruent

//, Corresponding angles are congruent (Postulate)

//, Consecutive interior angles are supplementary

Converses:

Corresponding angles Converse

Alternate Interior angles Converse

Alternate Exterior Converse

Consecutive interior Converse

Triangles Congruence/Similarity:

SSS

SAS

ASA

AAS

HL (only right triangles)

CPCTC

SSS Similarity

SAS similarity

AA similarity

Triangle Related Theorems:

Triangle sum theorem

Base angle theorem

Converse Base angle Theorem

Exterior angle theorem

Third angles theorem

Right Angle Theorem

Congruent Supplement Angle Theorem

Congruent Complement Angle Theorem

Axioms:

5. Through any two points there exist exactly one line

6. A line contains at least two points.

7. If two lines intersect, then their intersection is exactly one point.

8. Through any three noncollinear points there exists exactly one plane.

9. A plane contains at least three noncollinear points.

10. If two points lie in a plane, then the line containing them lies in the plane.

11. If two planes intersect, then their intersection is a line.

EXTRAS…….