Postulate 15   **(AA Similarity Postulate)**   If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.   (p. 255)

Postulate 16   **(Arc Addition Postulate)**   The measure of the arc formed by two adjacent arcs is the sum of the measures of these two arcs.   (p. 339)

Postulate 17   The area of a square is the square of the length of a side.   ($A = s^2$) (p. 423)

Postulate 18   **(Area Congruence Postulate)**   If two figures are congruent, then they have the same area.   (p. 423)

Postulate 19   **(Area Addition Postulate)**   The area of a region is the sum of the areas of its non-overlapping parts.   (p. 424)

Theorems

Points, Lines, Planes, and Angles

1-1   If two lines intersect, then they intersect in exactly one point.   (p. 23)

1-2   Through a line and a point not in the line there is exactly one plane.   (p. 23)

1-3   If two lines intersect, then exactly one plane contains the lines.   (p. 23)

Deductive Reasoning

2-1   **(Midpoint Theorem)**   If M is the midpoint of $\overline{AB}$, then
$$AM = \tfrac{1}{2}AB \text{ and } MB = \tfrac{1}{2}AB. \qquad \text{(p. 43)}$$

2-2   **(Angle Bisector Theorem)**   If $\overrightarrow{BX}$ is the bisector of $\angle ABC$, then
$$m\angle ABX = \tfrac{1}{2}m\angle ABC \text{ and } m\angle XBC = \tfrac{1}{2}m\angle ABC. \qquad \text{(p. 44)}$$

2-3   Vertical angles are congruent.   (p. 51)

2-4   If two lines are perpendicular, then they form congruent adjacent angles.   (p. 56)

2-5   If two lines form congruent adjacent angles, then the lines are perpendicular. (p. 56)

2-6   If the exterior sides of two adjacent acute angles are perpendicular, then the angles are complementary.   (p. 56)

2-7   If two angles are supplements of congruent angles (or of the same angle), then the two angles are congruent.   (p. 61)

2-8   If two angles are complements of congruent angles (or of the same angle), then the two angles are congruent.   (p. 61)