5-15 The midpoint of the hypotenuse of a right triangle is equidistant from the three vertices. (p. 185)

5-16 If an angle of a parallelogram is a right angle, then the parallelogram is a rectangle. (p. 185)

5-17 If two consecutive sides of a parallelogram are congruent, then the parallelogram is a rhombus. (p. 185)

5-18 Base angles of an isosceles trapezoid are congruent. (p. 190)

5-19 The median of a trapezoid
(1) is parallel to the bases.
(2) has a length equal to the average of the base lengths. (p. 191)

Inequalities in Geometry

6-1 **(The Exterior Angle Inequality Theorem)** The measure of an exterior angle of a triangle is greater than the measure of either remote interior angle. (p. 204)

6-2 If one side of a triangle is longer than a second side, then the angle opposite the first side is larger than the angle opposite the second side. (p. 219)

6-3 If one angle of a triangle is larger than a second angle, then the side opposite the first angle is longer than the side opposite the second angle. (p. 220)

Corollary 1 The perpendicular segment from a point to a line is the shortest segment from the point to the line. (p. 220)

Corollary 2 The perpendicular segment from a point to a plane is the shortest segment from the point to the plane. (p. 220)

6-4 **(The Triangle Inequality)** The sum of the lengths of any two sides of a triangle is greater than the length of the third side. (p. 220)

6-5 **(SAS Inequality Theorem)** If two sides of one triangle are congruent to two sides of another triangle, but the included angle of the first triangle is larger than the included angle of the second, then the third side of the first triangle is longer than the third side of the second triangle. (p. 228)

6-6 **(SSS Inequality Theorem)** If two sides of one triangle are congruent to two sides of another triangle, but the third side of the first triangle is longer than the third side of the second, then the included angle of the first triangle is larger than the included angle of the second. (p. 229)

Similar Polygons

7-1 **(SAS Similarity Theorem)** If an angle of one triangle is congruent to an angle of another triangle and the sides including those angles are in proportion, then the triangles are similar. (p. 263)

7-2 **(SSS Similarity Theorem)** If the sides of two triangles are in proportion, then the triangles are similar. (p. 263)