

LESSON 7-4

Theorem 7-4 (Triangle Proportionality): If a line is parallel to one side of a triangle and intersects the other two sides in two distinct points, then it separates these sides into segments of proportional lengths.

Theorem 7-5: If a line intersects two sides of a triangle and separates the sides into corresponding segments of proportional lengths, then the line is parallel to the third side.

Theorem 7-6: A segment whose endpoints are the midpoints of two sides of a triangle is parallel to the third side of the triangle, and its length is one-half the length of the third side.

Corollary 7-1: If three or more parallel lines intersect two transversals, then they cut off the transversals proportionally.

Corollary 7-2: If three or more parallel lines cut off congruent segments on one transversal, then they cut off congruent segments on every transversal.