Learning Objectives for Chapter Two
Parallel Lines

Learning objectives indicate what you should be able to do upon completing your work in each of the textbook sections.

Section 2-1: The Parallel Postulate and Special Angles
1. construct the perpendicular line from a point not on a given line to that line;
2. recognize when two lines, a line and a plane, or two planes are perpendicular;
3. recognize when two lines, a line and a plane, or two planes are parallel;
4. define parallel lines and parallel planes;
5. understand and apply terms such as transversal, corresponding angles, interior angles, exterior angles, alternate exterior angles, exterior angles on the same side of a transversal,
6. state and apply initial postulates involving parallel lines;
7. state, complete and apply selected theorems involving given parallel lines.

Section 2.2-. Indirect Proof
1. know the true/false relationships between a conditional statement and its converse, inverse and contrapositive;
2. state and apply the Law of Negative Inference,
3. state and apply the method of indirect proof,
4. recognize that negations and uniqueness theorems are often proved indirectly.

Section 2.3: Proving Lines Parallel
1. state and apply or prove selected theorems establishing that lines are parallel;
2. construct the fine parallel to a given line through a point outside the line.

Section 2.4: The Angles of a Triangle
1. know definitions of triangle and related terms ( vertices, sides, etc. )
2. classify triangles by their sides ( scalene, isosceles, equilateral );
3. classify triangles by their angles ( acute, right, obtuse, equiangular )
4. know and apply the theorem, “The sum of the angles of a triangle is 180°”;
5. state and apply the corollaries of the theorem stated in #4 above.

Section 2.5: Convex Polygons
1. know the definitions of polygon and related terms;
2. classify polygons as convex or concave and by their number of sides;
3. determine the number of diagonals for a polygon of n sides;
4. state and apply theorems involving sums of angle measures of a polygon;
5. classify polygons as equiangular/equilateral/regular; and
6. recognize a figure that is a polygon/regular polygon