What to know for the Chapter 5 Quiz

This quiz will cover sections 5.1 through 5.3. In particular, you should know

Postulates

- Through a point not on a line, there is exactly one parallel to the given line (The Parallel Postulate).

Constructions

- A line parallel to a given line through a given point.

Theorems

29. The measure of an exterior angle of a triangle is greater than the measure of either remote interior angle.
30. If two lines are cut by a transversal such that the two alternate interior angles are congruent, then the lines are parallel (AIP).
31. If two lines are cut by a transversal such that the two alternate exterior angles are congruent, then the lines are parallel (AEP).
32. If two lines are cut by a transversal such that two corresponding angles are congruent, then the lines are parallel (CAP).
33. If two lines are cut by a transversal such that two same side interior angles are supplementary, then the lines are parallel (SSISP).
34. If two lines are cut by a transversal such that two same side exterior angles are supplementary, then the lines are parallel (SSESP).
35. If two coplanar line are perpendicular to a third line, then they are parallel.
36. If two parallel lines are cut by a transversal, then each pair of alternate interior angles are congruent (PAI).
37. If two parallel lines are cut by a transversal, then any pair of angles are either congruent or supplementary.
38. If two parallel lines are cut by a transversal, then each pair of alternate exterior angles are congruent (PAE).
39. If two parallel lines are cut by a transversal, then each pair of corresponding angles are congruent (PCA).
40. If two parallel lines are cut by a transversal, then each pair of same side interior angles are supplementary (PSSIS).
41. If two parallel lines are cut by a transversal, then each pair of same side exterior angles are supplementary (PSSES).
42. In a plane, if a line is perpendicular to one of two parallel lines, it is perpendicular to the other.
43. If two lines are parallel to a third line, they are parallel to each other (Transitive Property of Parallel Lines).

Types of problems:

- Indirect proofs
- Proving lines are parallel
- Exterior angle problems
- Finding angles given parallel lines

I know it looks like a lot, but it's not really that bad. Many of the theorems are similar and the types of problems are pretty straight forward. Make sure you can do indirect proofs, proofs of parallel lines, understand the exterior angle theorem and be able to do simultaneous equations and you'll be in good shape!