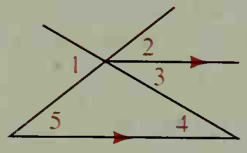
Chapter Summary

1. The properties of inequality most often used are stated on page 204.
2. The measure of an exterior angle of a triangle is greater than the measure of either remote interior angle. (The Exterior Angle Inequality Theorem)
3. The summary on page 208 gives the relationship between an if-then statement, its converse, its inverse, and its contrapositive. An if-then statement and its contrapositive are logically equivalent.
4. You begin an indirect proof by assuming temporarily that what you wish to prove true is *not* true. If this temporary assumption leads to a contradiction of a known fact, then your temporary assumption must be false and what you wish to prove true must be true.
5. In $\triangle RST$, if $RT > RS$, then $m\angle S > m\angle T$. Conversely, if $m\angle S > m\angle T$, then $RT > RS$.
6. The perpendicular segment from a point to a line (or plane) is the shortest segment from the point to the line (or plane).
7. The sum of the lengths of any two sides of a triangle is greater than the length of the third side. (The Triangle Inequality)
8. You can use the SAS Inequality and SSS Inequality Theorems to compare the lengths of sides and measures of angles in two triangles.

Chapter Review

Complete each statement by writing $<$, $=$, or $>$.

1. $m\angle 1$ ___?___ $m\angle 5$ **6–1**
2. $m\angle 1$ ___?___ $m\angle 2$
3. $m\angle 3$ ___?___ $m\angle 4$
4. $m\angle 5$ ___?___ $m\angle 2$
5. If $a > b$, $c < b$, and $d = c$, then a ___?___ d.



Given: All registered voters must be at least 18 years old.
What, if anything, can you conclude from each additional statement?

6. Eric is 19 years old.
7. Bonnie is not registered to vote. **6–2**
8. Will is 15 years old.
9. Barbara is a registered voter.