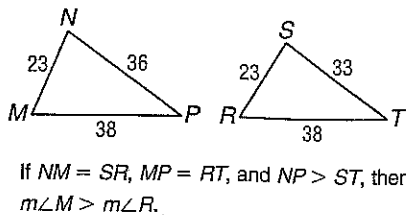


5-5 Study Guide and Intervention *(continued)*

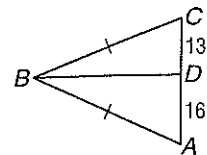
Inequalities Involving Two Triangles

SSS Inequality The converse of the Hinge Theorem is also useful when two triangles have two pairs of congruent sides.

<p>SSS Inequality</p>	<p>If two sides of a triangle are congruent to two sides of another triangle and the third side in one triangle is longer than the third side in the other, then the angle between the pair of congruent sides in the first triangle is greater than the corresponding angle in the second triangle.</p>	 <p>If $NM = SR$, $MP = RT$, and $NP > ST$, then $m\angle M > m\angle R$.</p>
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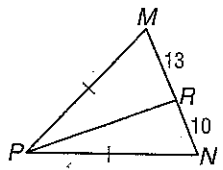
Example Write an inequality relating the measures of $\angle ABD$ and $\angle CBD$.

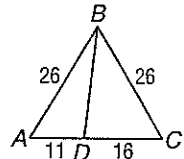
Two sides of $\triangle ABD$ are congruent to two sides of $\triangle CBD$, and $AD > CD$. By the SSS Inequality, $m\angle ABD > m\angle CBD$.

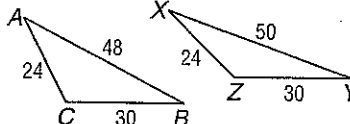


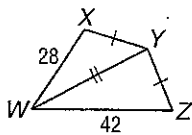
Exercises

Write an inequality relating the given pair of angle measures.

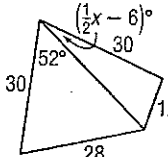
1. 
 $m\angle MPR, m\angle NPR$

2. 
 $m\angle ABD, m\angle CBD$

3. 
 $m\angle C, m\angle Z$

4. 
 $m\angle XYW, m\angle WYZ$

Write an inequality to describe the possible values of x .

5. 

6. 