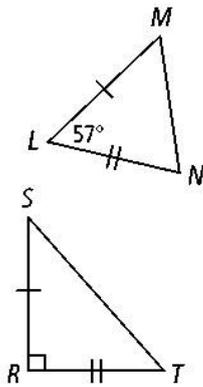


# 5-7 Practice

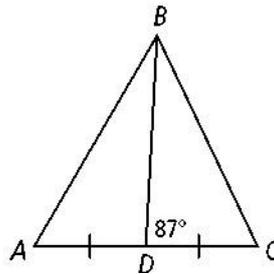
## Inequalities in Two Triangles

Write an inequality relating the given side lengths. If there is not enough information to reach a conclusion, write *no conclusion*.

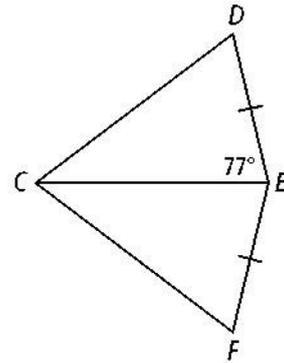
1.  $ST$  and  $MN$



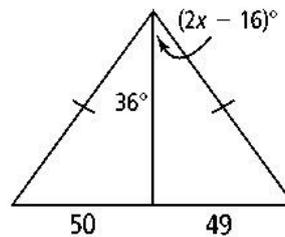
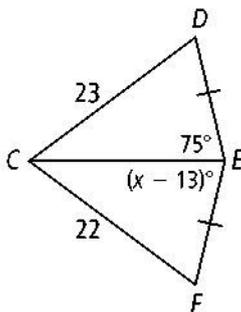
2.  $BA$  and  $BC$



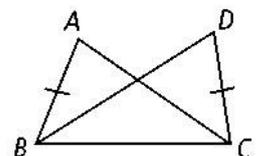
3.  $CD$  and  $CF$



4. Find the range of possible values for each variable.



5. In the triangles at the right,  $AB = DC$  and  $m \angle ABC < m \angle DCB$ . Explain why  $AC < BD$ .

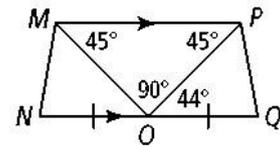


Copy and complete with  $>$  or  $<$ . Explain your reasoning.

6.  $m \angle POQ \stackrel{?}{=} m \angle MON$

7.  $MN \stackrel{?}{=} PQ$

8.  $MP \stackrel{?}{=} OP$



9. The legs of an isosceles triangle with a  $65^\circ$  angle vertex angle are congruent with the sides of an equilateral triangle.

Which triangle has a greater perimeter? How do you know?

Write an inequality relating the given angle measures. If there is not enough information to reach a conclusion, write *no conclusion*.

17.  $m \angle L$  and  $m \angle R$

18.  $m \angle MLN$  and  $m \angle ONL$

