

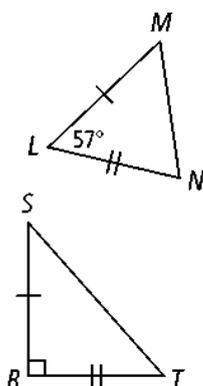
5-7 Practice

Inequalities in Two Triangles

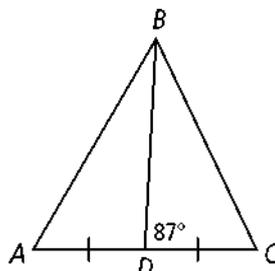
Form G

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

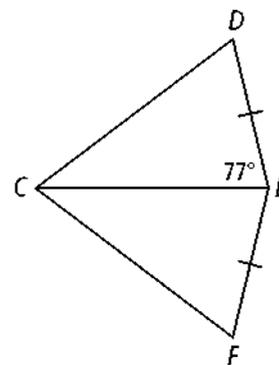
1. ST and MN



2. BA and BC



3. CD and CF

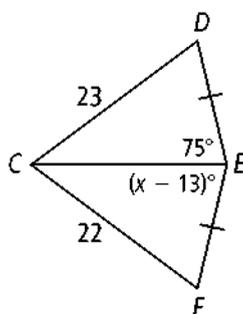


4. A crocodile opens his jaws at a 30° angle. He closes his jaws, then opens them again at a 36° angle. In which case is the distance between the tip of his upper jaw and the tip of his lower jaw greater? Explain.

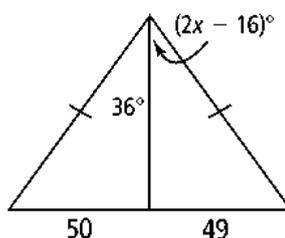
5. At which time is the distance between the tip of the hour hand and the tip of the minute hand greater, 2:20 or 2:25?

Find the range of possible values for each variable.

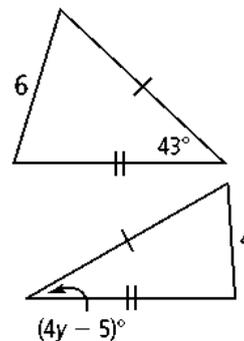
6.



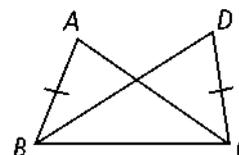
7.



8.



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



5-7 Practice (continued)

Inequalities in Two Triangles

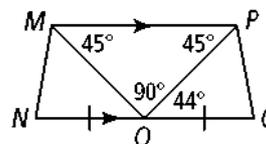
Form G

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

10. $m\angle POQ$? $m\angle MON$

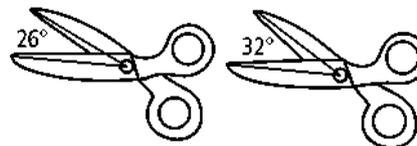
11. MN ? PQ

12. MP ? OP



13. Jogger A and Jogger B start at the same point. Jogger A travels 0.9 mi due east, then turns 120° clockwise, then travels another 3 mi. Jogger B travels 0.9 mi due west, then turns 115° counterclockwise, then travels another 3 mi. Do the joggers end in the same place? Explain.

14. In the diagram at the right, in which position are the tips of the scissors farther apart?



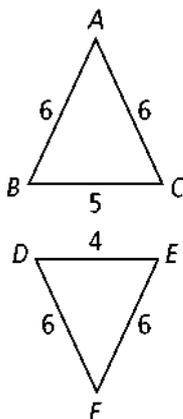
Position A

Position B

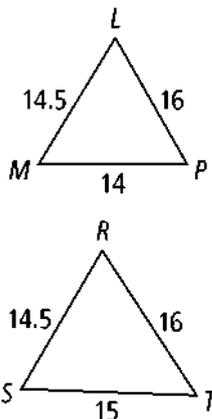
15. The legs of an isosceles triangle with a 65° vertex angle are congruent with the sides of an equilateral triangle. Which triangle has a greater perimeter? How do you know?

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

16. $m\angle A$ and $m\angle F$



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



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

