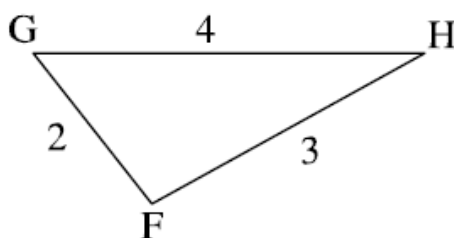


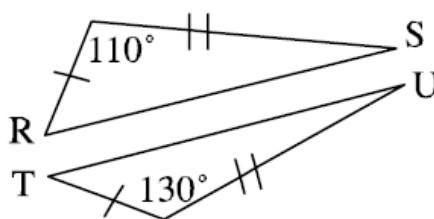
Name: \_\_\_\_\_

## Triangle Inequality

- 1) Name the smallest and largest angles of the triangle



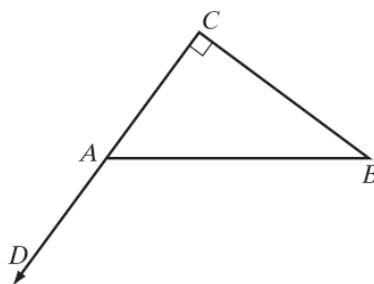
- 2) Is RS greater than, less than, or equal to TU



- 3) Given: Right triangle ABC,  $m\angle C = 90$

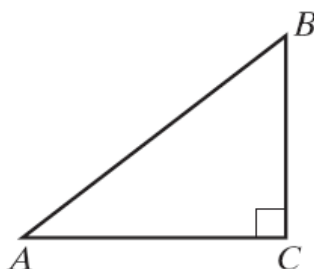
$\angle BAD$  is an exterior angle at A

Prove:  $\angle BAD$  is obtuse



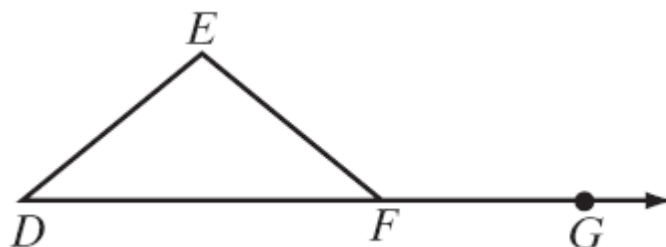
- 4) Given: Right  $\triangle ABC$  with  $m\angle C = 90$

Prove:  $\angle A$  is acute



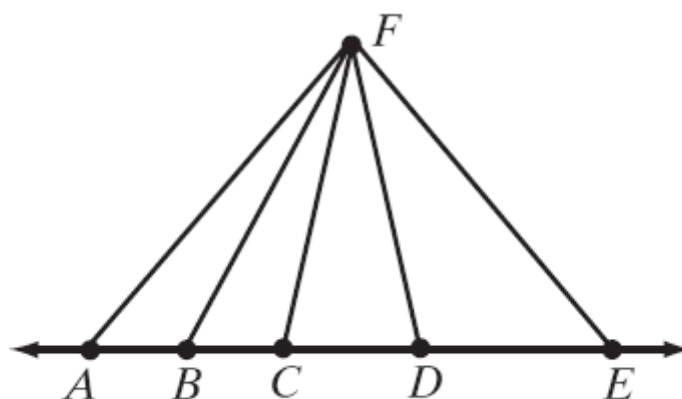
5) Given: Isosceles  $\triangle DEF$  with  $DE = FE$  and exterior  $\angle EFG$

Prove:  $m\angle EFG > m\angle EFD$



6) Given: Point F not on  $\overline{ABCDE}$  and  $FC = FD$

Prove:  $m\angle ABF > m\angle EDF$



7) Given:  $\triangle SMR$  with  $\overline{STM}$  extended through M to P

Prove:  $m\angle RMP > m\angle SRT$

