Level 1 Geometry Received:

Name:_____ Block: Due:11/19/08

Isosceles Triangle Theorem

Theorem: If two sides of a Triangle are congruent the opposite angles are congruent.

Draw a diagram of a triangle and label the points and produce display the given(s) and the to prove part of this proof.

You'll need two triangles, so how will you modify your diagram to accommodate this?

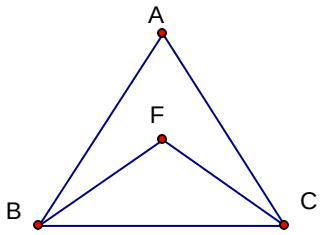
How can you be sure it is ok to do this?

Go ahead and write out the proof. (this should look familiar)

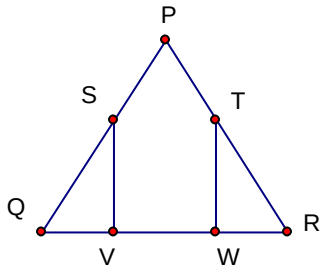
In the future when you use this theorem you say the reason is "ITT."

Prove the following conjectures:

1. Given: $\overline{AB} \cong \overline{AC}$
   $\overline{FB} \cong \overline{FC}$
   Prove: $\angle ABF \cong \angle ACF$



2. Given: $\overline{PQ} \cong \overline{PR}$
   $\overline{SV} \perp \overline{QR}$
   $\overline{TW} \perp \overline{QR}$
   $\overline{QV} \cong \overline{WR}$
   Prove: $\overline{SV} \cong \overline{TW}$



3. Given: $\overline{AB} \cong \overline{AC} \cong \overline{BC}$
   Prove: $\angle A \cong \angle B \cong \angle C$