6. A corollary is an offshoot from a theorem; statement that can easily be proved by applying a theorem.

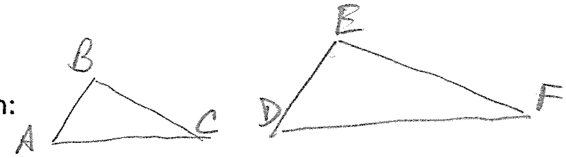
7. **Corollary: If 2 angles of one triangle are congruent to 2 angles of another triangle, then the 3rd angles are congruent.**

$\triangle ABC$, $\triangle DEF$

Given: $\angle A \cong \angle D$, $\angle B \cong \angle E$

Prove: $\angle C \cong \angle F$

Diagram:



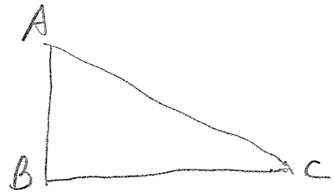
8. **Corollary: The acute angles of a right triangle are complementary.**

$\triangle ABC$

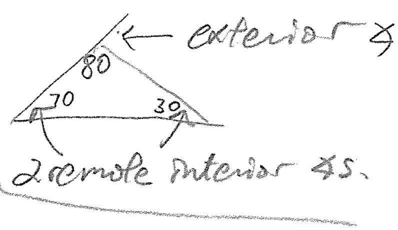
Given: $\overline{AB} \perp \overline{BC}$

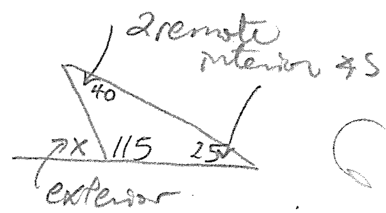
Prove: $\angle A$ complements $\angle C$

Diagram:



9. **Exterior angles and remote interior angles**:





exterior ∡ – formed by extending one side of a $\triangle$

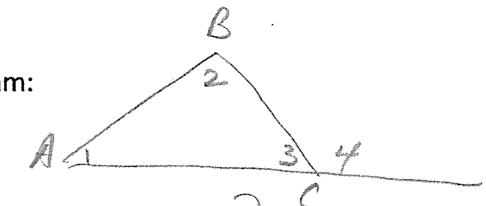
remote interior ∡s – the 2 ∡s inside the $\triangle$ not adjacent to the exterior ∡s.

10. **Exterior Angle Thm: The measure of an exterior angle is a triangle equals the sum of the measures of the remote interior angles.**

Given: $\triangle ABC$

Prove: $m\angle 4 = m\angle 1 + m\angle 2$

Diagram:



(1) $m\angle 1 + m\angle 2 + m\angle 3 = 180$

(2) $\angle 3, \angle 4$ linear pair $\rightarrow$ (3) $\angle 3$ supp $\angle 4$ $\rightarrow$ (4) $m\angle 3 + m\angle 4 = 180$

(5) $m\angle 1 + m\angle 2 + m\angle 3 = m\angle 3 + m\angle 4$ $\rightarrow$ (6) $m\angle 1 + m\angle 2 = m\angle 4$

(1) Sum of meas. of ∡s of $\triangle = 180$
(2) Def linear pair
(3) Linear pair postulate
(4) Def supplem. ∡s.
(5) Substitution
(6) Subtraction property of equality