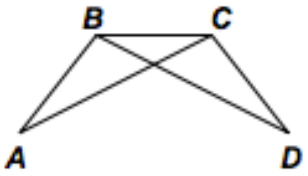
Geometry CC – Mr. Valentino Name: _____

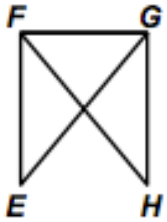
Unit 5 Lesson 9: Overlapping Triangles Date: _____ Period: _____

Let's separate and redraw the indicated triangles. We will then identify any **common** angles or sides.

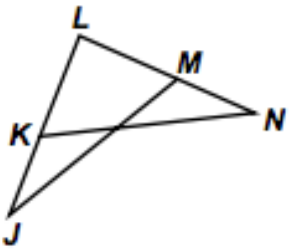
7. $\triangle ABC$ and $\triangle DCB$



8. $\triangle EFG$ and $\triangle HGF$



9. $\triangle JML$ and $\triangle NKL$

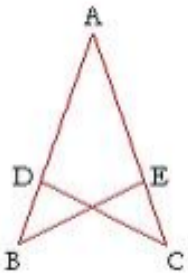


Let's practice some proofs that involve **overlapping** triangles. Remember! It can be helpful to highlight what you are attempting to prove.

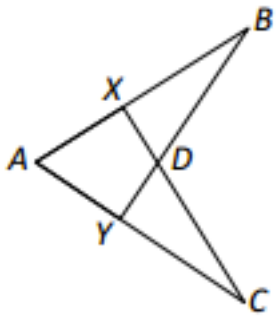
When working with overlapping triangles, try to draw the triangles separately!

1.) Given: BE≅CD
∡BEA≅ ∡CDA

Prove: ∡B≅ ∡C



2. **Given**: $AX \cong AY$, $CX \perp AB$, $BY \perp AC$
Prove: $AB \cong AC$



3.

Given: $FH \cong GE$, $\angle HFG \cong \angle EGF$
Prove: $\Delta GEH \cong \Delta FHE$