**Geometry U 2-2 Triangle Congruence Put all work and solutions on another sheet.**

1] Draw an example of two triangles which are congruent by the Angle-Side-Angle Postulate.

 MAKE SURE to mark congruent parts.



2] Are /\ JAK and /\ NAK congruent?

If so, by what argument?

3] Copy and complete the following justification:

 [a] JK = ? ; this is given.

 [b] JA = ?; this is given.

 [c] ? = AK; a segment equals itself in length.

 [d] /\ JAK $\tilde{=}$ ? by the \_\_\_\_\_\_\_ Postulate.

4] [a] How many triangles are possible

with the following conditions?

Two segments are 2.5 inches and 1.75 inches

long, and they surround a 36o angle.

[b] Do these conditions go with a postulate for triangle congruence? If so, what postulate?

5] Two trusses for the attic of a house are shown at the right.

AC, BC, A1C1, and B1C1 are each 18 feet long. / C and / C1 each measure 100o.

[a] Are /\ ABC and /\ A1B1C1 congruent? If so,

by what postulate?



[b] If both trusses must go in the same attic,

how important is their congruence? Justify

your response.

6] Copy and complete the following proof:

 [a] AC = ? because each is ? long.

 [b] ? = B1C1 because \_\_\_\_\_\_\_\_\_\_\_\_.

 [c] / C $\tilde{=}$ / ? because \_\_\_\_\_\_\_\_\_\_\_\_.

 [d] /\ ABC $\tilde{=}$ /\ A1B1C1 by the \_\_\_\_\_\_\_\_\_\_\_ Postulate.

7] Construct a right angle. Show your arcs.