**UNIT 5 #7 TRIANGLE CONGRUENCE (CONT.)**

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| **HYPOTENUSE-LEG (HL) CONGRUENCE POSTULATE** | **ANGLE-SIDE-ANGLE (ASA) CONGRUENCE POSTULATE** |
| If the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a leg of a right Δ are ≅ to the hypotenuse and a \_\_\_\_\_\_\_\_ of a \_\_\_\_\_\_\_\_\_\_\_\_ second Δ, then the 2 Δs are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_  \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_ then \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_  | If two angles and the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of one triangle are congruent to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and the included side of a second triangle, then the triangles are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. If \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_  \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_ then \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_ image2.gif                                                     0000D0C8Christine's Mac                B472C195: \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_  |

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| **ANGLE-ANGLE-SIDE (AAS) CONGRUENCE POSTULATE** |
| If two angles and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ side of one triangle are congruent to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the corresponding non-included side of a second triangle, then the triangles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.If \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_  \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_ then \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_ \_\_\_\_\_\_\_ ≅ \_\_\_\_\_\_\_ image2.gif                                                     0000D0C8Christine's Mac                B472C195: |

**Example 1:** Is it possible to prove these triangles are congruent? If so, state the postulate or theorem you would use. Explain your reasoning.

**GIVEN 🡪**

**PROVE 🡪**

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| *STATEMENT* | *REASON* |
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**Example 2:** Is it possible to prove these triangles are congruent? If so, state the postulate or theorem you would use. Explain your reasoning.

Yes or No? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Example 3: YOU TRY!**

Given: AD║EC, BD ≅ BC

Prove: ∆ABD ≅ ∆EBC

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| *STATEMENT* | *REASON* |
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**Example 4:**

GIVEN 🡪 $\overbar{AD}$ ⊥ $\overbar{CB}$

 $\overbar{AC}$ ≅ $\overbar{AB}$

PROVE 🡪 ∆ABD ≅ ∆ACD

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| *STATEMENT* | *REASON* |
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**Example 5:** ΔJKL ≅ ΔMNO, m∠K = (3x + 7)o, m∠N = (2x + 24)o, m∠L = (5x – 42)o, and m∠O = (4x – 25)o. Find the measure of ∠M.

