Geometry Honors
Unit 6: Congruent Triangles
Mathematician: $\qquad$
Period: $\qquad$
6.4a Proving Triangles are Congruent (SSS/HL)

## LEVEL: EMERGING

Directions: State the Triangle Congruence Theorem that could be used to prove the two triangles congruent. If triangles are not congruent, state NOT congruent.

2)

3)

$\qquad$

Directions: Use the SSS or HL Theorem to prove two triangles congruent. You may need less or more steps than provided in the table.
5.


Prove: $\triangle A B D \cong \triangle C D B$

| Statamants | Reasoll |
| :---: | :---: |
| 1. | 1. |
| $\stackrel{3}{ }$ | $\overline{2}$ |
| 3. | 3. |
| 4. | 4. |
| $\stackrel{\square}{5}$ | 5. |
| 6. | 6. |

6. 

Given: $\triangle \mathrm{ABD}$ is an isosceles triangle


Prove: $\triangle A B C \cong \triangle D B C$

7.

Given: $N$ is the midpoint of $\overline{\mathrm{MO}}, \overline{\mathrm{LM}} \cong \overline{\mathrm{OP}}$, and $\overline{\mathrm{LN}} \cong \overline{\mathrm{PN}}$

8.

Given: $\overline{A B} \cong \overline{C B}, \overline{B D}$ is a median of $\overline{A C}$
Prove: $\triangle A B D \cong \triangle C B D$


Prove: $\triangle \mathrm{LMN} \cong \triangle \mathrm{PON}$

| Statements | RBas011 |
| :---: | :---: |
| 1. | 1. |
| 2 | 2 |
| 3. | 3. |
| 4. | 4. |
| $\stackrel{\square}{ }$ | - |
| $\bigcirc$ | 6. |



## LEVEL: MASTERY

9. Directions: Use the SSS or HL Theorem to prove two triangles congruent. You may need less or more steps than provided in the table.

Given: $\overline{A F} \cong \overline{D C}, \overline{A B} \perp \overline{B C}, \overline{D E} \perp \overline{E F}, \overline{A B} \cong \overline{D E}$ Prove: $\triangle A B C \cong \triangle D E F$


