| **Geometry Local Lomac 2015-2016** | Date 3/9 | due 3/10 | **Congruent Triangles ASA, SSS   10.4L** |

Name _____ **Per_____**

LO: I can prove that ASA and SSS are shortcuts for proving that two triangles are congruent and
can use them to determine whether or not two triangles are congruent and write a proof.

☐ **DO NOW**   On the back of this packet

☐ (1)   **Congruence: A sequence of transformations.**

transparencies, dry erase markers, eraser, compass, straightedge

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other.
Determine a sequence of transformations that maps △A'B'C' back to △ABC. Write a description and justification
for each step in the sequence of transformations.
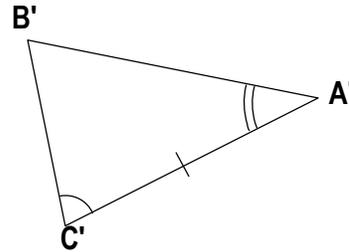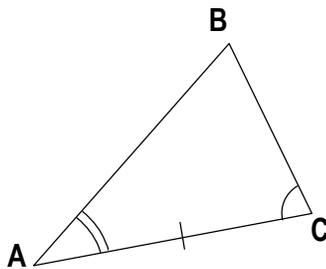
Is ASA enough to prove/guarantee 2 triangles are congruent? _____

☐ (2)   **Congruence: A sequence of rigid transformations.   SSS**

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other.
Determine a sequence of transformations that maps △A'B'C' back to △ABC. Write a description and justification
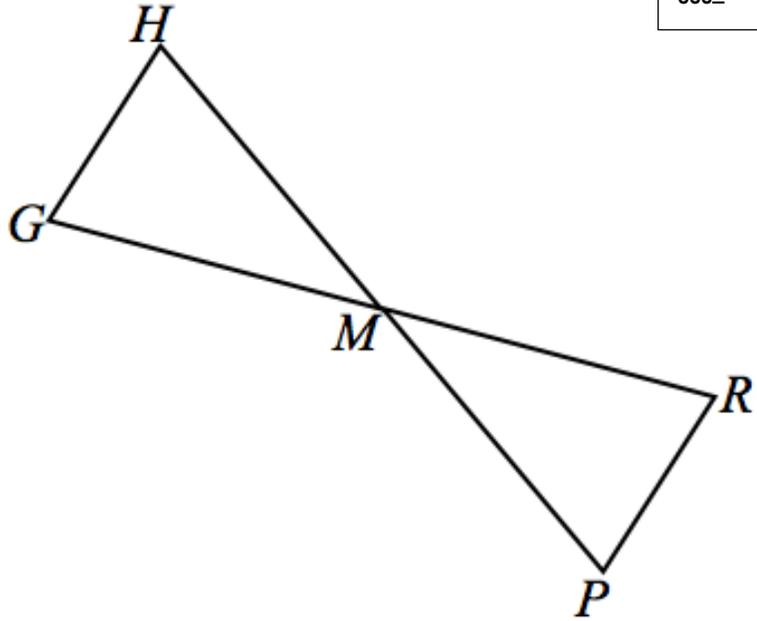for each step in the sequence of transformations.
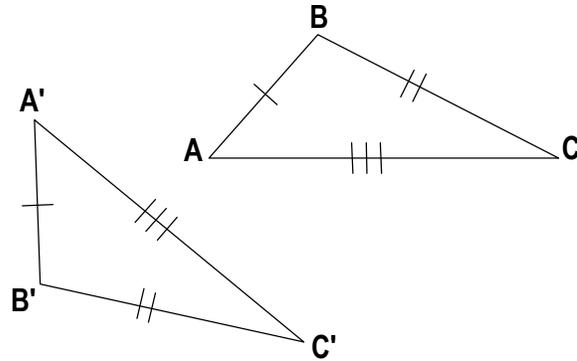
Is SSS enough to prove/guarantee 2 triangles are congruent? _____

☐ (3)   ☐ Given: M is the midpoint of $\overline{HP}$, $\angle H \cong \angle P$

Prove: Two triangle are congruent

I know that . . .	because . . .

☐ (4) ☐ Given: JKLM is a rectangle with diagonal KM

Prove: Two triangle are congruent
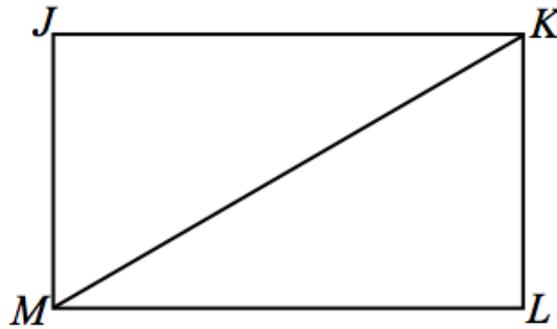
I know that . . .	because . . .

☐ (5) ☐ Given: $\overline{RY} \cong \overline{RB}$, $\overline{AR} \cong \overline{XR}$

Prove: △ARY ≅ to another triangle
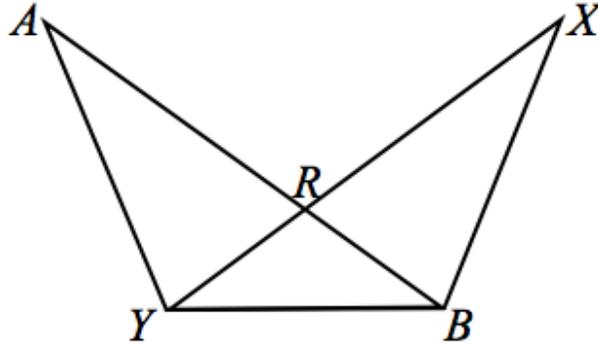
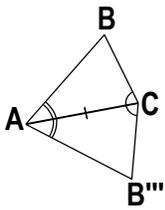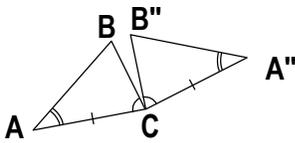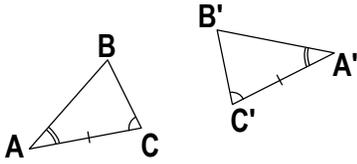| I know that . . .	because . . .

☐ (6) **Exit Ticket**

ON THE LAST PAGE

☐ (7) **Homework**

(1) Given: The diagram as marked.   Prove: △ABC ≅ △DEF

B

E

C

A

D

F
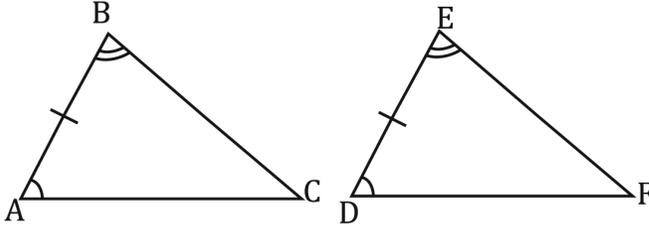
(2) Given: $\overline{AB} \cong \overline{CD}$ and $\overline{AD} \cong \overline{CB}$.   Prove: △ABD ≅ △CDB

B

C

A

D
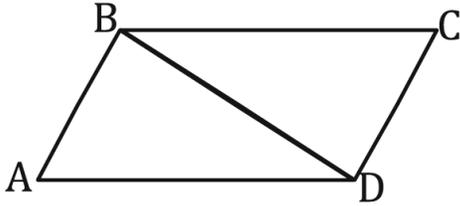
(3) Given: $\overline{AE}$ bisects $\overline{BD}$ and ∠B ≅∠D.   Prove: △ABC ≅ △EDC

A

D

C

B

E

☐ (7)   **Homework**
cont.
Congruence: A sequence of transformations (ASA #1 remix)

☐ Prove: If, in a triangle, we know that two pairs of corresponding angles and the pair of corresponding sides between them are congruent, then two triangles are congruent. Describe the transformations below and explain how you are certain when one point maps to another.
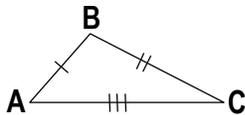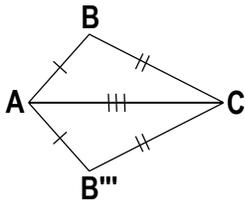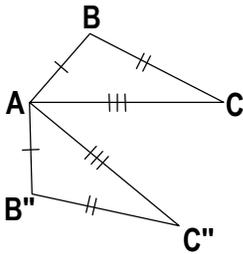
☐ **(7)** **Homework**

Congruence: A sequence of transformations (SSS #2 remix)

Prove: If three pairs of corresponding sides are congruent for two triangles, then two triangles are congruent.

Describe the transformations below and explain how you are certain when one point maps to another.
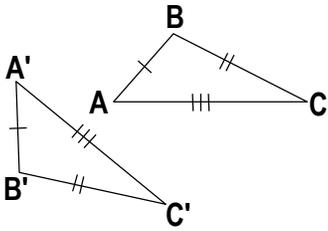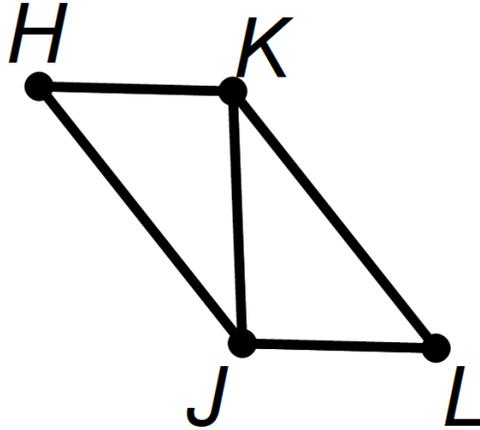
Exit Ticket   **Name**_____ **Date** _____ **Per**_____   **10.4L**

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

Show that the triangles are congruent given the information: $\overline{HK} \cong \overline{JL}$ and $\overline{HJ} \cong \overline{KL}$
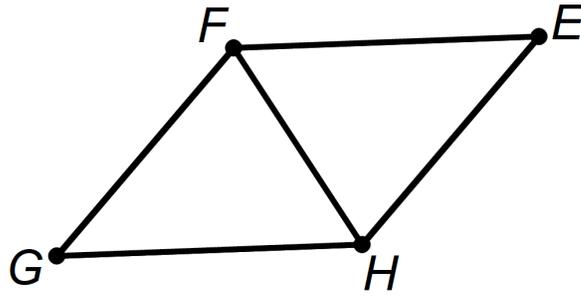

I know that . . .	because . . .

DO NOW   **Name**_____ **Date** _____ **Per**_____   **10.4L**

(1) Show that the triangles are congruent by SAS≅ given the information $\overline{FE} \cong \overline{GH}, \angle EFH \cong \angle GHF$

I know that . . .	because . . .