

Name \_\_\_\_\_ Per \_\_\_\_\_

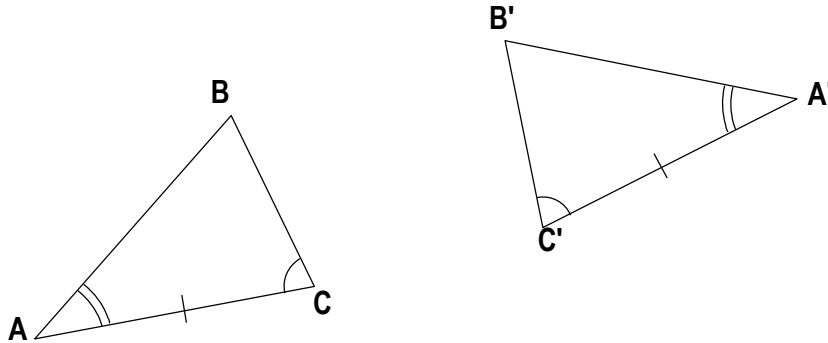
LO: I can prove that ASA and SSS are shortcuts for proving that two triangles are congruent and can use them to determine whether or not two triangles are congruent and write a proof.

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

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

transparencies, dry erase markers, eraser, compass, straightedge

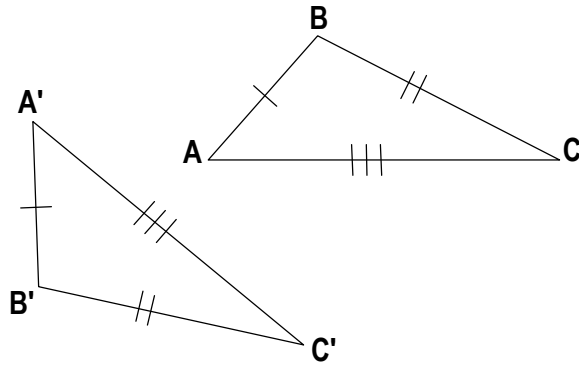
Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other. Determine a sequence of transformations that maps  $\triangle A'B'C'$  back to  $\triangle ABC$ . Write a description and justification for each step in the sequence of transformations.



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  $\triangle A'B'C'$  back to  $\triangle ABC$ . Write a description and justification for each step in the sequence of transformations.

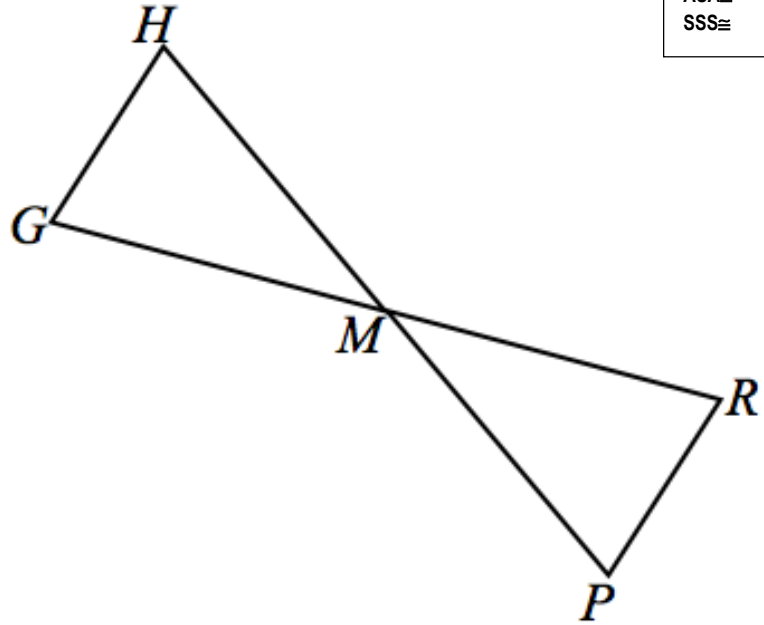


Is SSS enough to prove/guarantee 2 triangles are congruent? \_\_\_\_\_

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

Prove: Two triangle are congruent

Choose which to use  
 SAS  $\cong$   
 ASA  $\cong$   
 SSS  $\cong$

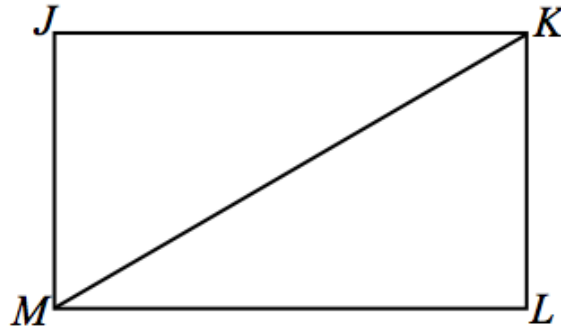


I know that ...	because ...

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

Prove: Two triangles are congruent

Choose which to use  
SAS  $\cong$   
ASA  $\cong$   
SSS  $\cong$



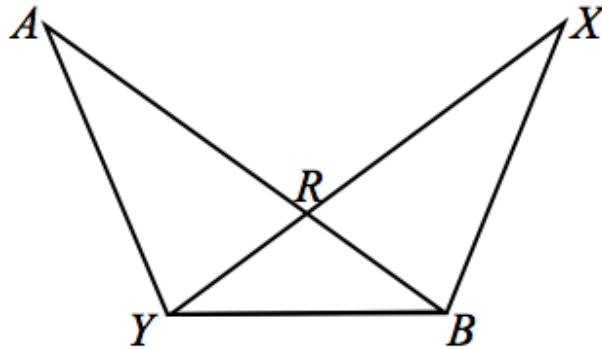
I know that ...

because ...


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

Prove:  $\triangle ARY \cong$  to another triangle

Choose which to use  
SAS $\cong$   
ASA $\cong$   
SSS $\cong$



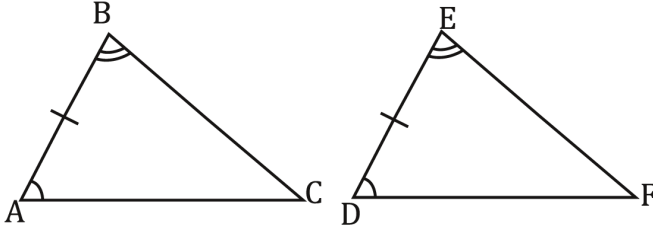
I know that ...	because ...

(6) **Exit Ticket**

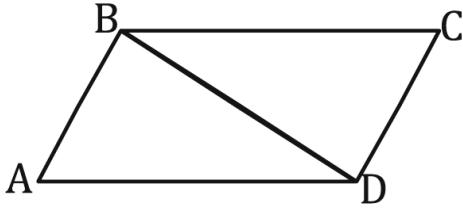
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 (7) **Homework**

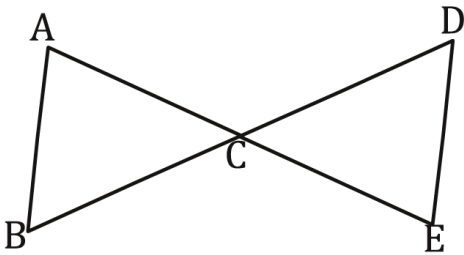
(1) Given: The diagram as marked. Prove:  $\triangle ABC \cong \triangle DEF$



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



(3) Given:  $\overline{AE}$  bisects  $\overline{BD}$  and  $\angle B \cong \angle D$ . Prove:  $\triangle ABC \cong \triangle EDC$

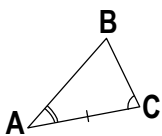
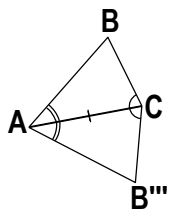
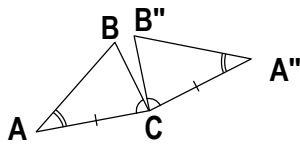
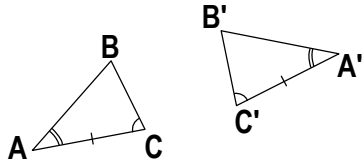


□ (7)  
cont.

**Homework**

**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.

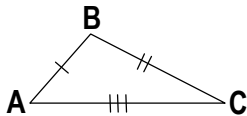
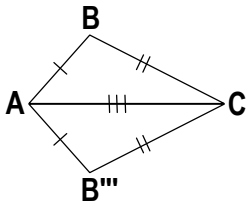
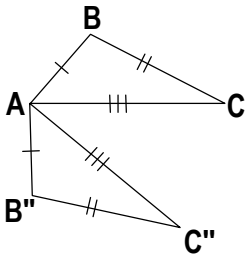
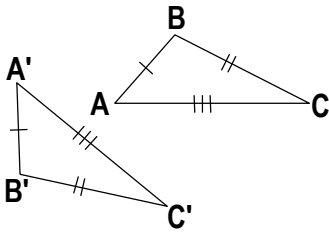


□ (7) Homework  
cont.

**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** \_\_\_\_\_

**4.4R**

(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:

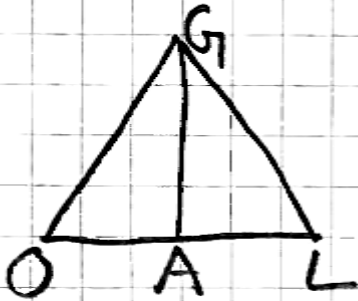
No exit ticket. Proof Progress only

(1) PROOF PROGRESS A:

Write a proof for #1 or #2.

Attach this to the top of your "Proof Progress" packet with a paper clip.

① Given:  $\overline{GA}$  is the perpendicular bisector of  $\overline{OL}$   
 Prove:  $\triangle GOA \cong \triangle GLA$



② Given:  $\overline{IN}$  bisects  $\angle WNR$   
 $\overline{WN} \cong \overline{NR}$   
 Prove:  $\triangle WIN \cong \triangle RIN$

