# TRIANGLE CONGRUENCE

4.4

# Triangle Congruence Theorems

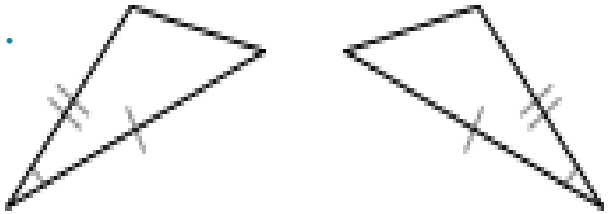
X

Why AA (or AAA) doesn't work: http://www.mathopenref.com/congruentaaa.html
Why SSA doesn't work: http://www.mathopenref.com/congruentssa.html

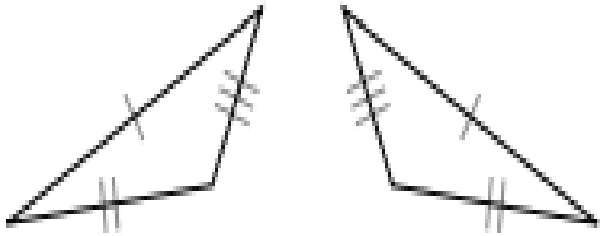
# SAS, SSS, SSA OR NONE OF THESE?

Determine whether the two triangles could be proven congruent by SSS, SAS, SSA or *none of these.* Draw any implied info in the picture & justify your answer. **TIP: Check the marks on BOTH triangles!

1.



2.



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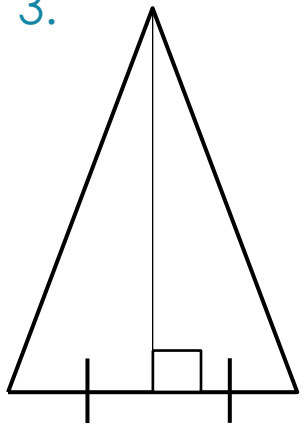

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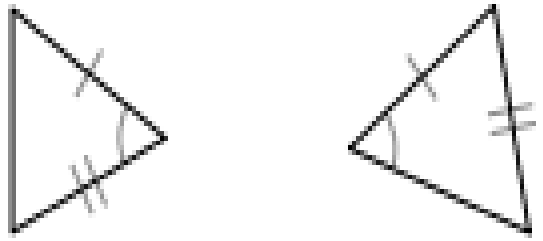
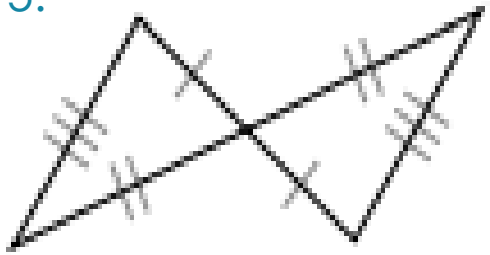


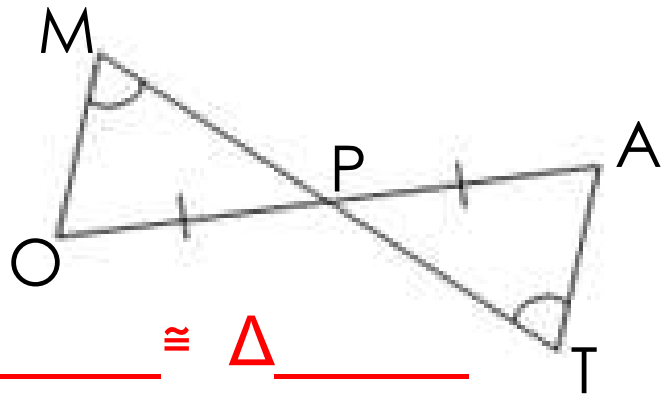
5.



# ASA, AAS, or neither?

If possible, determine which triangles must be congruent (write a congruence statement). Draw any implied info in the picture & justify your answer.

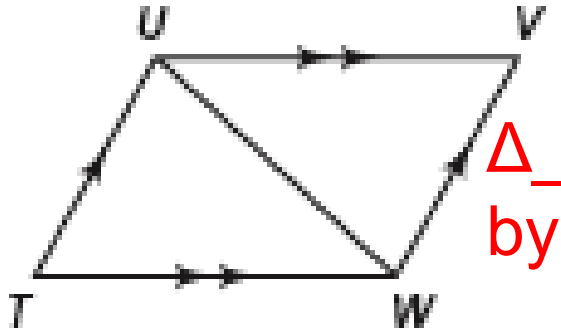
1.




Δ_____ ≅ Δ_____

by _____

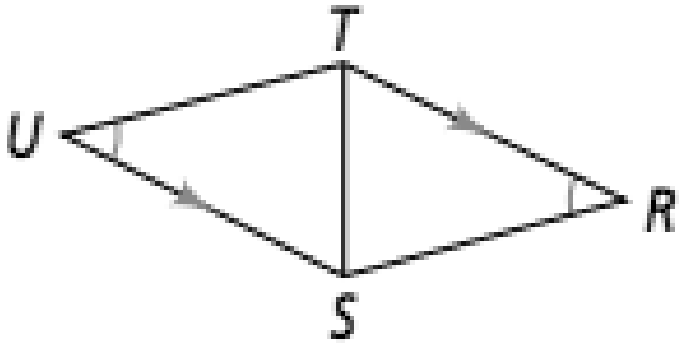
2.




Δ_____ ≅ Δ_____

by _____

3.

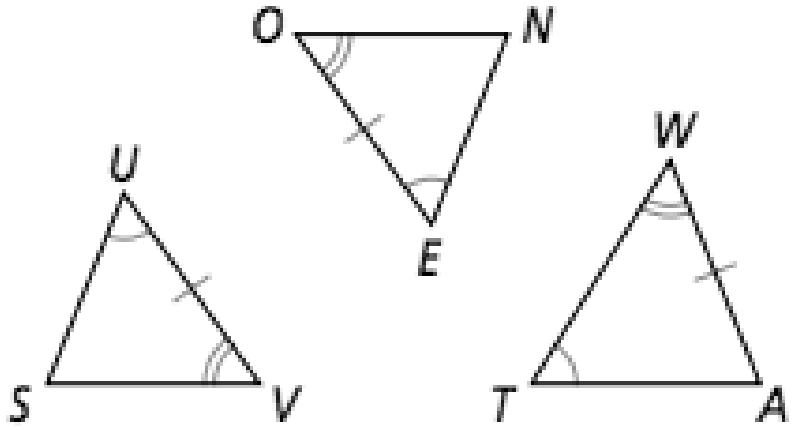



Δ_____ ≅ Δ_____

by _____

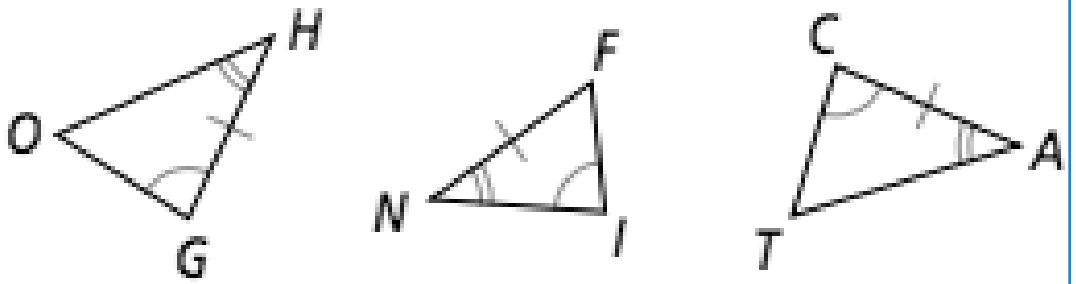
Write a congruence statement for the two triangles that could be proven congruent by ASA.

## Example:




Δ_____ ≅ Δ_____
by _____

## YOU TRY!

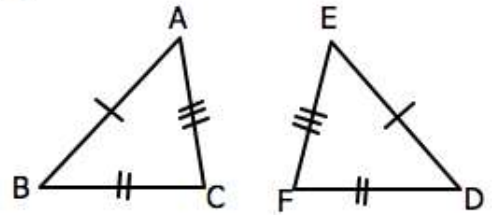



Δ_____ ≅ Δ_____
by _____

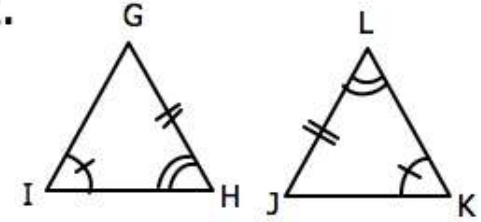
**Which theorem could be used to prove the triangles are congruent (SSS, SAS, ASA, AAS)? Or write *not enough information.***

Remember to draw on your picture when necessary.

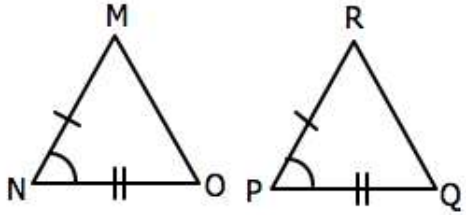
1.




2.




3.

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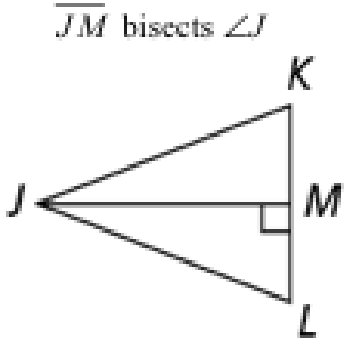


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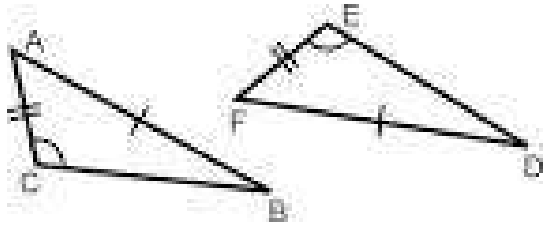


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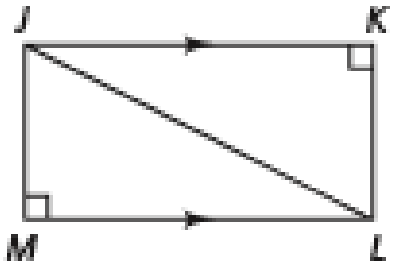
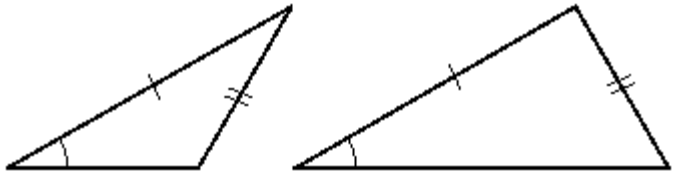


## YOU TRY!

**Which theorem could be used to prove the triangles are congruent (SSS, SAS, ASA, AAS)? Or write *not enough information.***

Remember to draw on your picture when necessary.

6.



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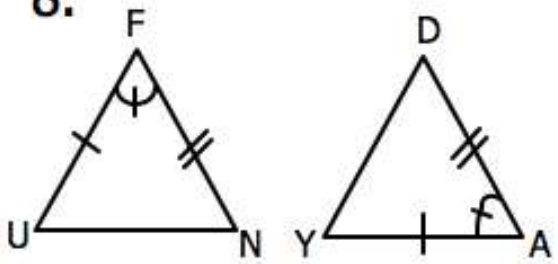


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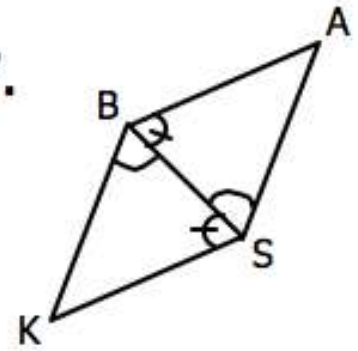
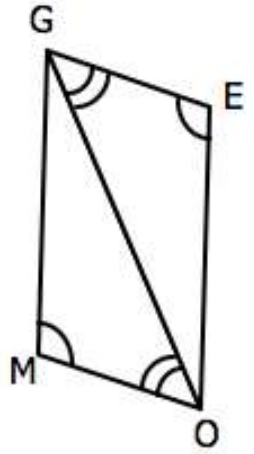


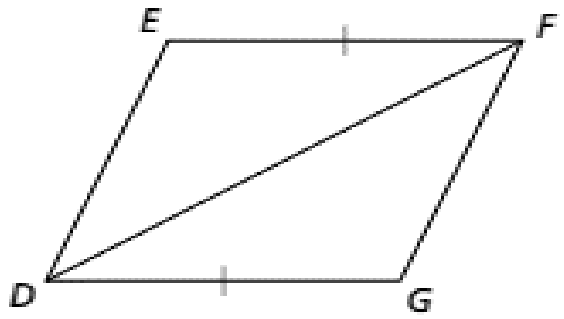

9.

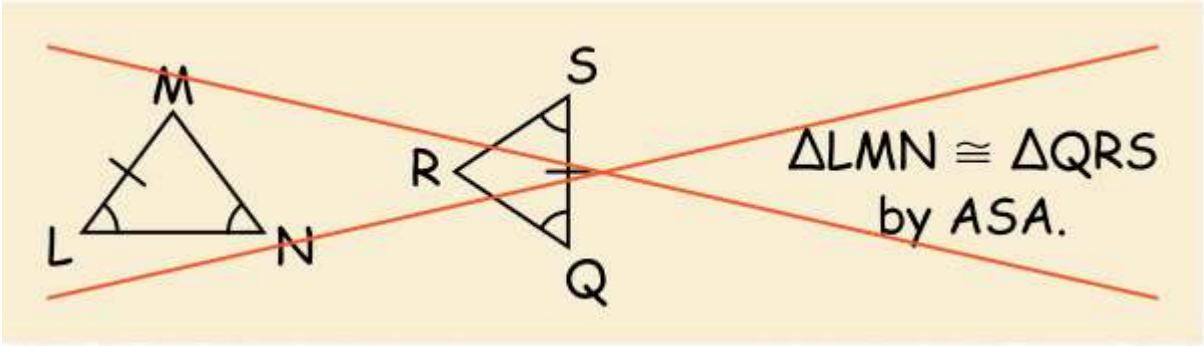


***Think About It!***

**What other information do you need to prove △DEF ≅ △FGD by SAS?**

1) **Mark and justify the implied information.**
2) **Determine what information is MISSING to use SAS**



***YOU TRY!***

**Your friend asks you for help on a geometry exercise. Below is your friend's paper. What error did your friend make? Explain.**