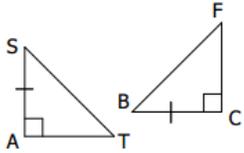


Name \_\_\_\_\_

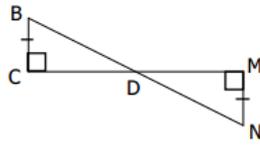
Date \_\_\_\_\_

**I. Complete each correspondence statement.**

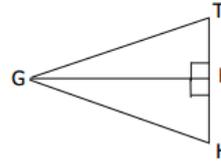
1)  $\triangle SAT \cong \triangle$  \_\_\_\_\_



2)  $\triangle ABCD \cong \triangle$  \_\_\_\_\_

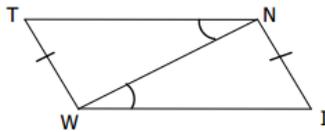


3)  $\triangle GHK \cong \triangle$  \_\_\_\_\_

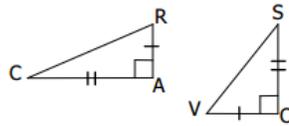


**II. Write a congruence statement for each pair of congruent triangles.**

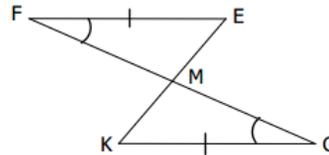
4)  $\triangle$  \_\_\_\_\_  $\cong \triangle$  \_\_\_\_\_



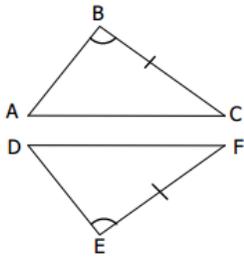
5)  $\triangle$  \_\_\_\_\_  $\cong \triangle$  \_\_\_\_\_



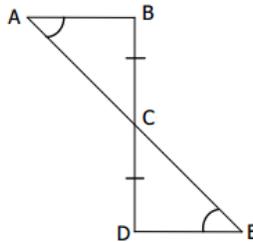
6)  $\triangle$  \_\_\_\_\_  $\cong \triangle$  \_\_\_\_\_



7)  $\triangle$  \_\_\_\_\_  $\cong \triangle$  \_\_\_\_\_



8)  $\triangle$  \_\_\_\_\_  $\cong \triangle$  \_\_\_\_\_

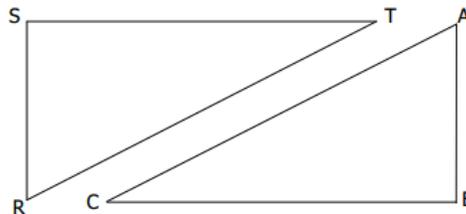


**III. Draw  $\triangle EDG$  and  $\triangle QRS$ . Label the corresponding parts if  $\triangle EDG \cong \triangle QRS$ . Then complete each statement.**

- 7)  $\angle E \cong$  \_\_\_\_\_      8)  $\overline{DG} \cong$  \_\_\_\_\_      9)  $\angle EDG \cong$  \_\_\_\_\_      10)  $\overline{GE} \cong$  \_\_\_\_\_  
 11)  $\overline{ED} \cong$  \_\_\_\_\_      12)  $\angle EGD \cong$  \_\_\_\_\_

**IV. Label the corresponding part if  $\triangle RST \cong \triangle ABC$ . Use the figures to complete each statement.**

- 13)  $\angle ACB \cong$  \_\_\_\_\_      14)  $\angle TSR \cong$  \_\_\_\_\_  
 15)  $\overline{AC} \cong$  \_\_\_\_\_      16)  $\overline{ST} \cong$  \_\_\_\_\_  
 17)  $\overline{RS} \cong$  \_\_\_\_\_      18)  $\angle CBA \cong$  \_\_\_\_\_



**V. Find the value of "x".**

19) Given  $\triangle ABC \cong \triangle DEF$ ,  $AB=15$ ,  $BC=20$ ,  $AC=25$ , and  $FE=3x-7$

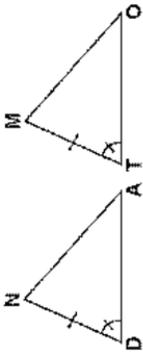


20) Given  $\triangle ABC \cong \triangle DEF$ ,  $DE=10$ ,  $EF=13$ ,  $DF=16$ , and  $AC=4x-8$



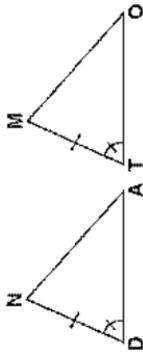
**The pair of triangles below has two corresponding parts marked as congruent.**

1. What additional information is needed for a SAS congruence correspondence?



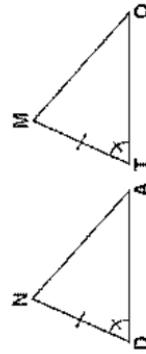
Answer: \_\_\_\_\_  $\cong$  \_\_\_\_\_

2. What additional information is needed for an ASA congruence correspondence?



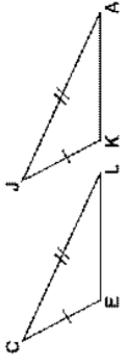
Answer: \_\_\_\_\_  $\cong$  \_\_\_\_\_

3. What additional information is needed for an AAS congruence correspondence?



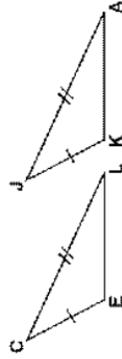
Answer: \_\_\_\_\_  $\cong$  \_\_\_\_\_

4. What additional information is needed for a SSS congruence correspondence?



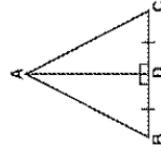
Answer: \_\_\_\_\_  $\cong$  \_\_\_\_\_

5. What additional information is needed for a SAS congruence correspondence?



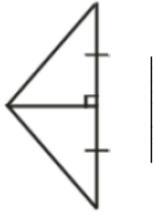
Answer: \_\_\_\_\_  $\cong$  \_\_\_\_\_

6. What additional information is needed for an ASA congruence correspondence?

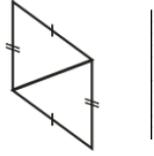


Answer: \_\_\_\_\_  $\cong$  \_\_\_\_\_

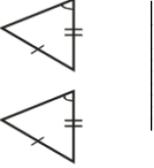
Using the tick marks for each pair of triangles, name the method (SSS, SAS, ASA, AAS) that can be used to prove the triangles congruent. If not, write **not possible**. (Hint: Remember to look for the reflexive side and vertical angles!!!)



\_\_\_\_\_



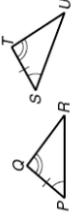
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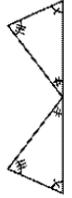
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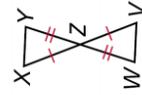
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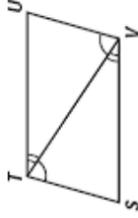
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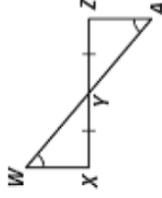
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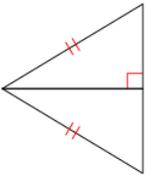
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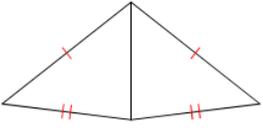
\_\_\_\_\_

State if the two triangles are congruent. If they are, state how you know.

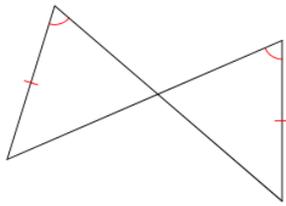
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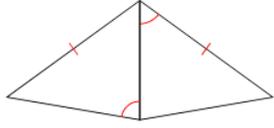
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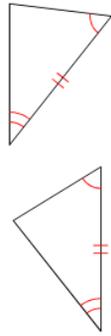
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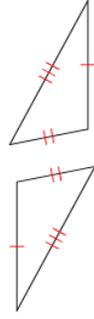
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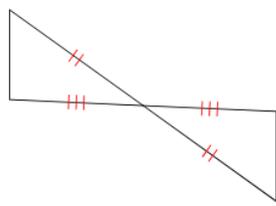
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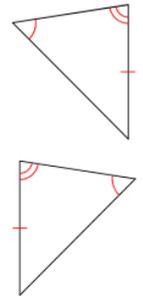
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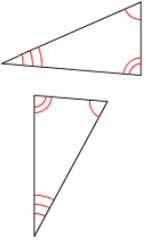
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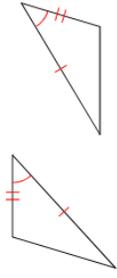
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11)



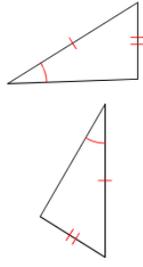
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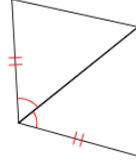
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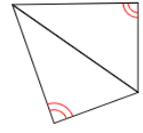
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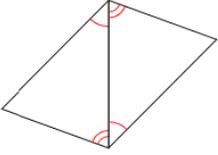
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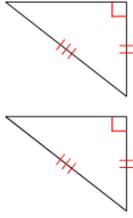
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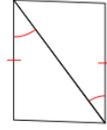
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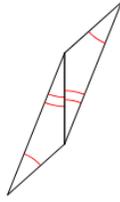
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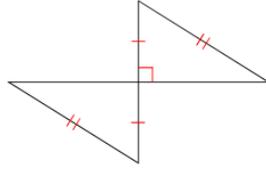
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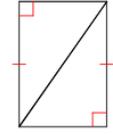
16)



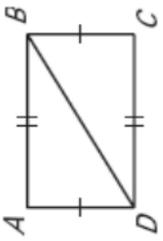
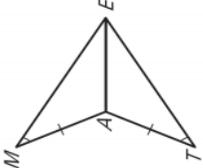
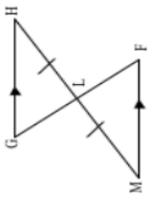
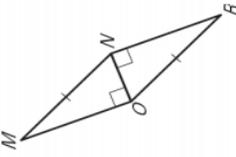
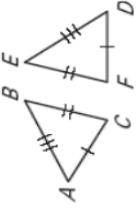
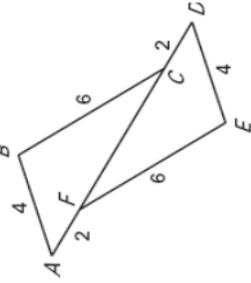
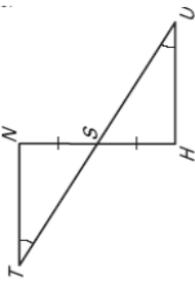
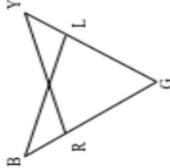
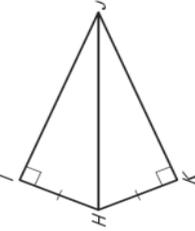
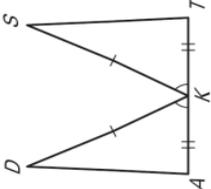
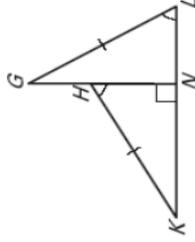
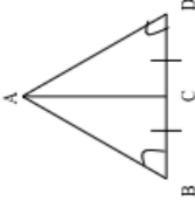
18)



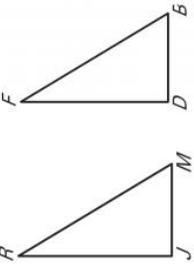
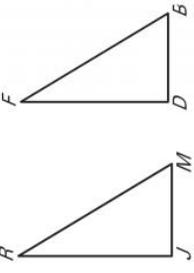
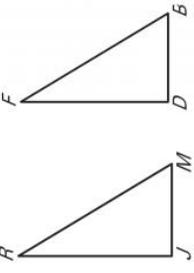
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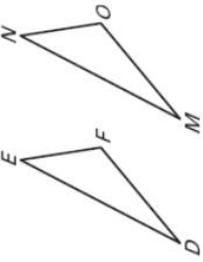
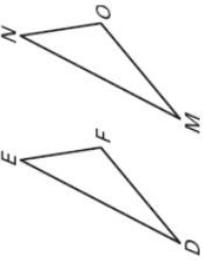
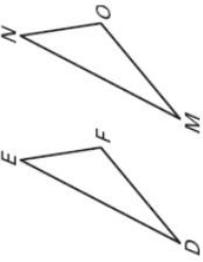
Decide whether the congruence statement is true.  
 Explain your reasoning using SSS, SAS, AAS, HL, or ASA.  
 If it is not true, state "not enough info given".

|  |  |  |
|--|--|--|
| 1. $\triangle ABD \cong \triangle CDB$<br>    | 2. $\triangle MAE \cong \triangle TAE$<br>    | 3. $\triangle LGH \cong \triangle LFM$<br>    |
| 4. $\triangle MNO, \triangle RON$<br>         | 5. $\triangle ABC \cong \triangle DEF$<br>    | 6. $\triangle ABC \cong \triangle DEF$<br>    |
| 7. $\triangle NST \cong \triangle HSU$<br>   | 8. $\triangle BLG \cong \triangle YRG$<br>   | 9. $\triangle HIJ \cong \triangle KHJ$<br>   |
| 10. $\triangle DKA \cong \triangle TKS$<br> | 11. $\triangle NHK \cong \triangle NLG$<br> | 12. $\triangle ABC \cong \triangle ADC$<br> |

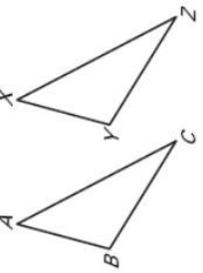
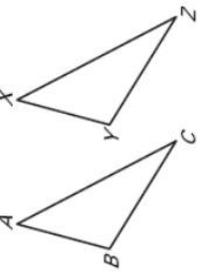
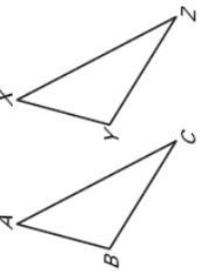
State the third congruence that must be given to prove that  $\triangle JRM \cong \triangle DFB$ .

|  |   |
|--|---|
| 13.  | $\overline{JR} \cong \overline{DF}, \overline{JM} \cong \overline{DB}$ , _____ $\cong$ _____<br>Using SSS $\cong$                   |
| 14.  | $\overline{JR} \cong \overline{DF}, \overline{JM} \cong \overline{DB}$ , _____ $\cong$ _____<br>Using SAS $\cong$                   |
| 15.  | $\overline{RM} \cong \overline{FB}, \angle J \cong \angle D; \angle J$ is a right angle,<br>_____ $\cong$ _____<br>Using HL $\cong$ |

State the third congruence that is needed to prove that  $\triangle DEF \cong \triangle MNO$ .

|  |   |
|--|---|
| 16.  | $\overline{DE} \cong \overline{MN}, \angle M \cong \angle D$ , _____ $\cong$ _____<br>Using SAS $\cong$ |
| 17.  | $\overline{FE} \cong \overline{ON}, \angle F \cong \angle O$ , _____ $\cong$ _____<br>Using AAS $\cong$ |
| 18.  | $\overline{DF} \cong \overline{MO}, \angle F \cong \angle O$ , _____ $\cong$ _____<br>Using ASA $\cong$ |

State the third congruence that is needed to prove that  $\triangle ABC \cong \triangle XYZ$ .

|   |   |
|---|---|
| 19.  | $\angle A \cong \angle X, \angle B \cong \angle Y$ , _____ $\cong$ _____<br>Using AAS $\cong$           |
| 20.  | $\angle A \cong \angle X, \overline{AB} \cong \overline{XY}$ , _____ $\cong$ _____<br>Using ASA $\cong$ |
| 21.  | $\overline{BC} \cong \overline{YZ}, \angle C \cong \angle Z$ , _____ $\cong$ _____<br>Using SAS $\cong$ |

Write a congruence statement for the following triangles (it may help to re-draw them).  
 State which method you used to find it.

22.  $\triangle AFD \cong$  \_\_\_\_\_ by \_\_\_\_\_

23.  $\triangle ACE \cong$  \_\_\_\_\_ by \_\_\_\_\_

24.  $\triangle ACD \cong$  \_\_\_\_\_ by \_\_\_\_\_

