4.2 Triangle Congruence by SSS and SAS Homework

Name _____

Draw ΔMGT. Use the triangle to answer the questions below.

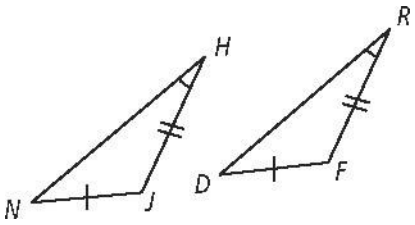
1. What angle is included between $\overline{GM}$ and $\overline{MT}$?

2. Which sides include $\angle T$?

3. What angle is included between $\overline{GT}$ and $\overline{MG}$?

Would you use SSS or SAS to prove the triangles congruent? If there is not enough information to prove the triangles congruent by SSS or SAS, write *not enough information.* Explain your answer if you add a congruence to your diagram or why you they are not congruent

4.



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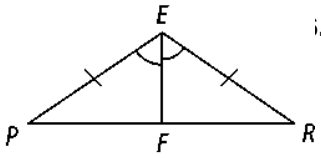

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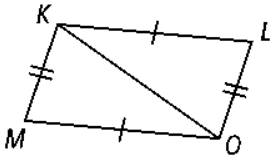

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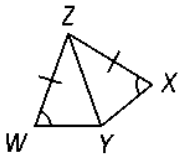

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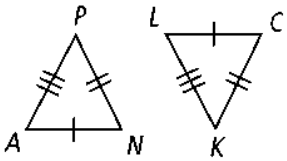

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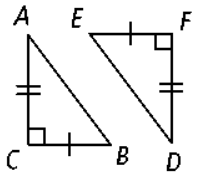

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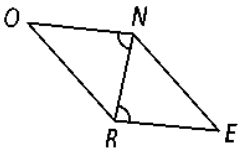

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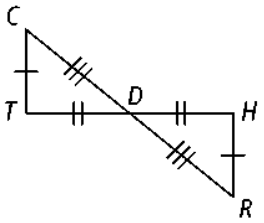
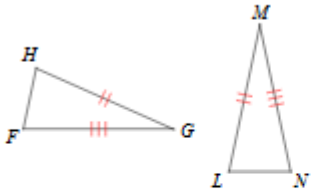
12.

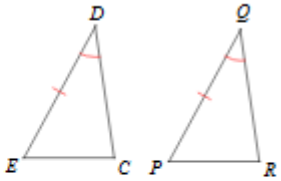


State what additional information is required in order to know that the triangles are congruent for the reason given.

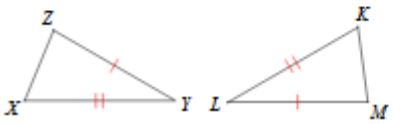
13) SSS



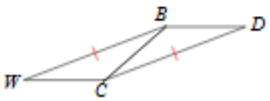
14) SAS



15) SSS



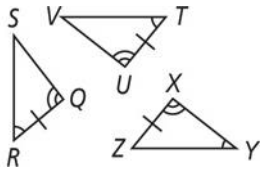
16) SAS



4.3 Triangle Congruence by ASA and AAS

Name the two triangles that are congruent by ASA.

1.



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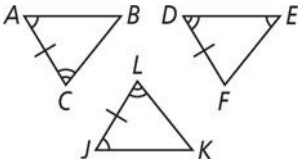
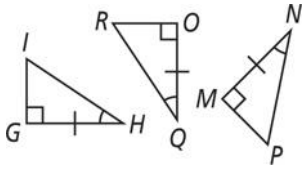
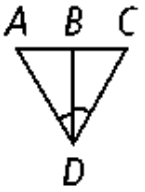


3.

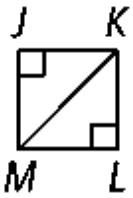


What additional information would you need to prove each pair of triangles congruent by the stated postulate or theorem?

4. ASA Postulate

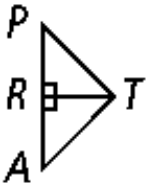


5. AAS Theorem



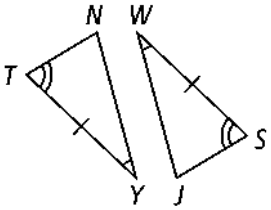
6. ASA Postulate

7. AAS Theorem



Can you prove the triangles congruent? If there is not enough information to prove the triangles congruent write *not enough information.* Explain your answer if you add a congruence to your diagram or why you they are not congruent.

8.



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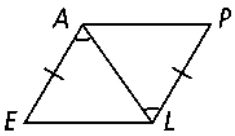

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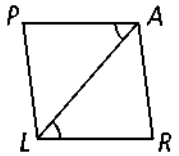

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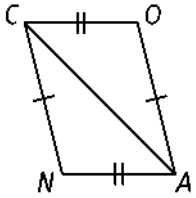

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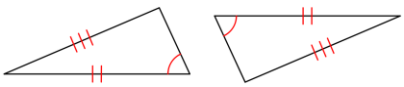

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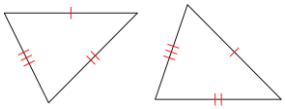

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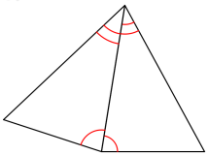

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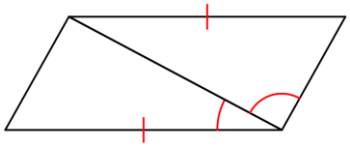

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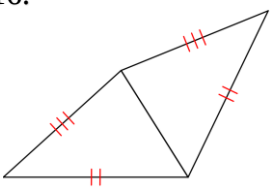

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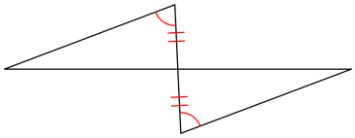

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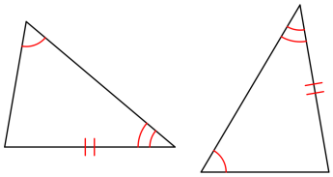

19.