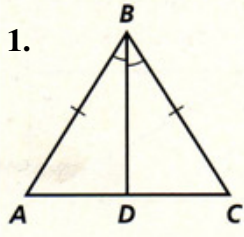


Geometry
Worksheet – Congruent Triangles

NAME _____

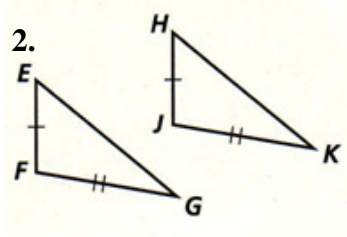
Date _____ HR _____

Determine whether the following triangles are congruent. If they are, name the triangle congruence (pay attention to proper correspondence when naming the triangles) and then identify the Theorem or Postulate (SSS, SAS, ASA, AAS, HL) that supports your conclusion. Be sure to show any additional congruence markings you used in your reasoning. If the triangles cannot be proven congruent, state “not possible.” Then given the reason it is not possible.



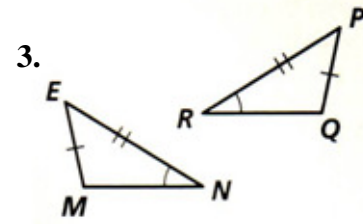
Congruence:

Reason:



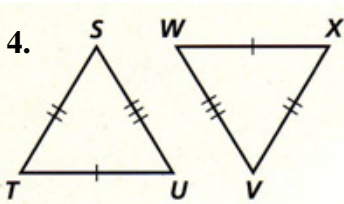
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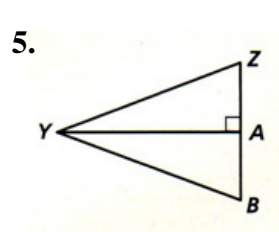
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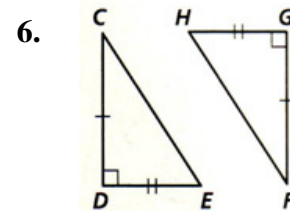
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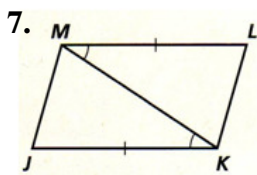
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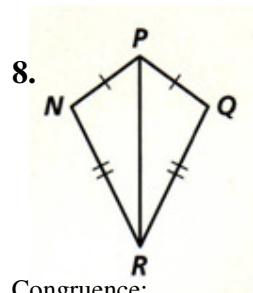
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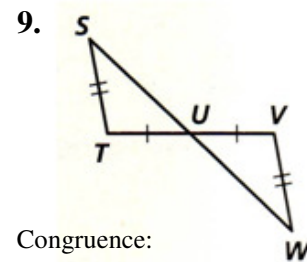
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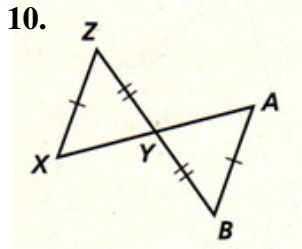
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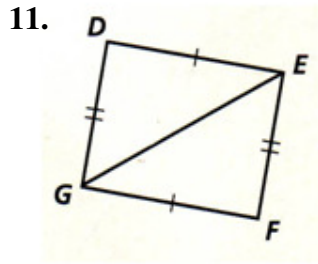
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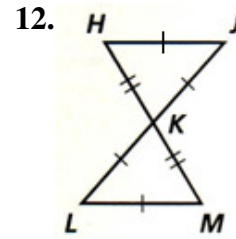
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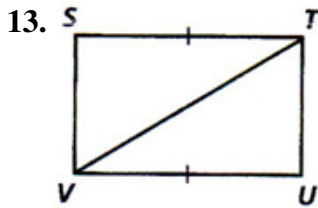
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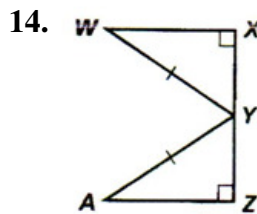
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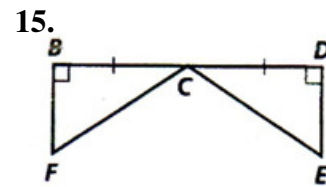
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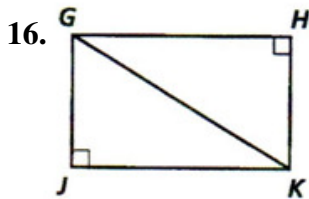
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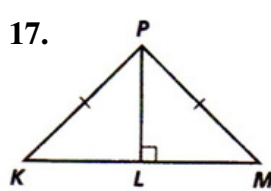
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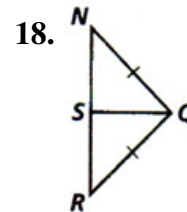
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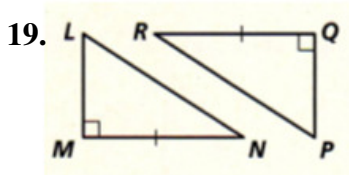
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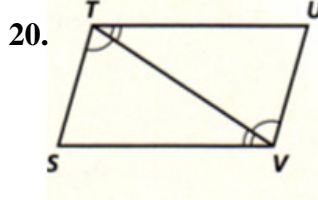
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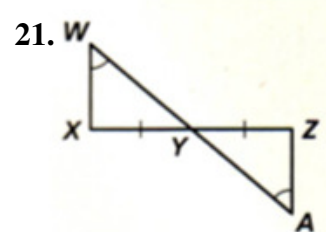
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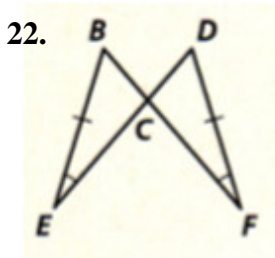
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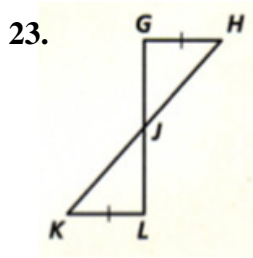
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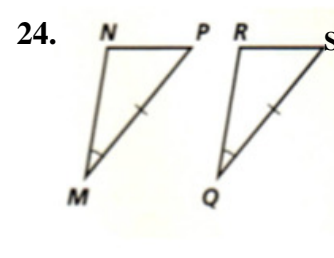
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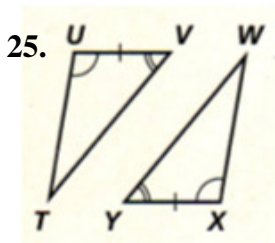
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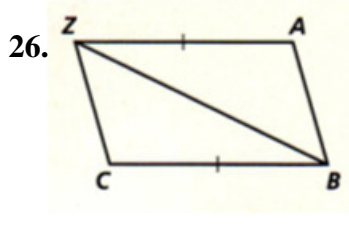
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Reason:



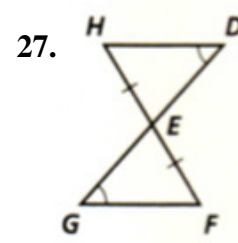
Congruence:

Reason:



Congruence:

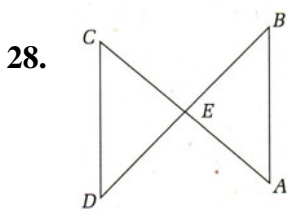
Reason:



Congruence:

Reason:

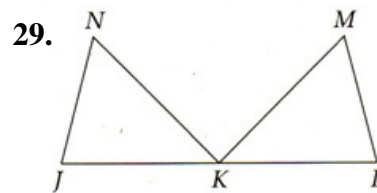
Use the given information to mark the diagram appropriately. Name the triangle congruence (pay attention to proper correspondence when naming the triangles) and then identify the Theorem or Postulate (SSS, SAS, ASA, AAS, HL) that would be used to prove the triangles congruent. If the triangles cannot be proven congruent, state “not possible.”



Given: $\overline{CD} \cong \overline{AB}$; $\angle B \cong \angle D$

Congruence:

Reason:

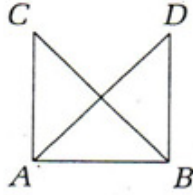


Given: $\overline{JN} \cong \overline{LM}$; $\overline{NK} \cong \overline{MK}$;
 $\angle N \cong \angle M$

Congruence:

Reason:

30.

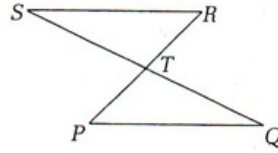


Given: $\overline{AC} \cong \overline{BD}$; $\overline{AD} \cong \overline{BC}$

Congruence:

Reason:

31.

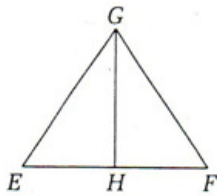


Given: \overline{SQ} and \overline{PR} bisect each other

Congruence:

Reason:

32.



Given: \overline{GH} bisects $\angle EGF$;
 $\overline{EG} \cong \overline{FG}$

Congruence:

Reason:

Now choose one of the problems from 28-32 and perform a complete two-column proof. Your “given” will be the “Given” from the problem and your “prove” will be the “Congruence” statement you created.