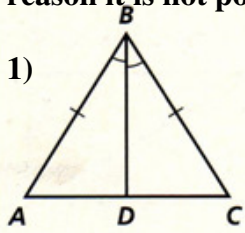


Geometry
Worksheet – Congruent Triangles

NAME _____

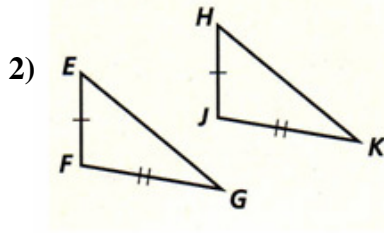
Date _____ HR _____

- a) Determine whether the following triangles are congruent.
 b) 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.
 c) Be sure to show any additional congruence markings you used in your reasoning.
 d) If the triangles cannot be proven congruent, state “not possible.” Then given the reason it is not possible.



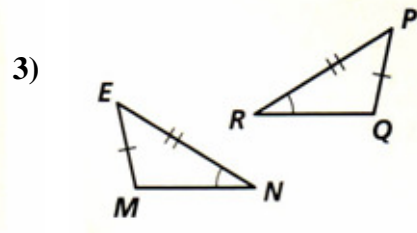
Congruence:
 $\triangle ABD \cong \triangle$ _____

Reason:



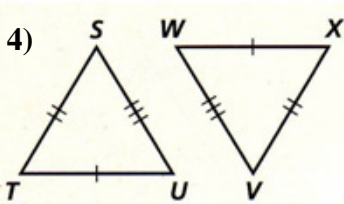
Congruence:
 $\triangle EFG \cong \triangle$ _____

Reason:



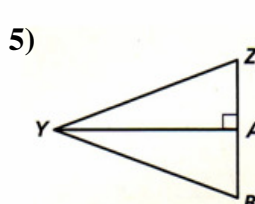
Congruence:
 $\triangle EMN \cong \triangle$ _____

Reason:



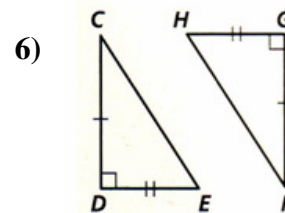
Congruence:
 $\triangle STU \cong \triangle$ _____

Reason:



Congruence:
 $\triangle YZA \cong \triangle$ _____

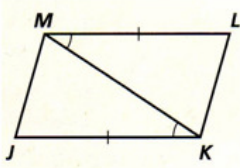
Reason:



Congruence:
 $\triangle CDE \cong \triangle$ _____

Reason:

7)

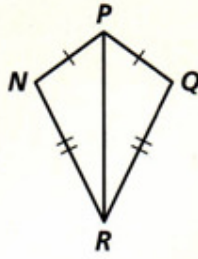


Congruence:

$\Delta KJM \cong \Delta$ _____

Reason:

8)

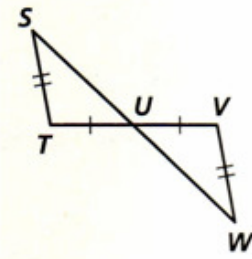


Congruence:

$\Delta NPR \cong \Delta$ _____

Reason:

9)

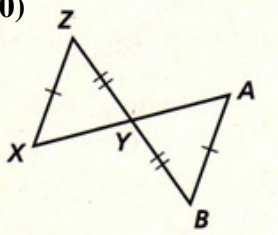


Congruence:

$\Delta STU \cong \Delta$ _____

Reason:

10)

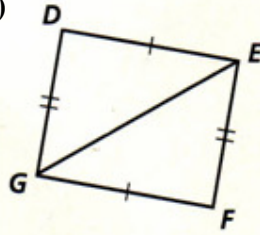


Congruence:

$\Delta XYZ \cong \Delta$ _____

Reason:

11)

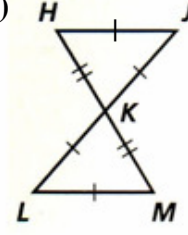


Congruence:

$\Delta DEG \cong \Delta$ _____

Reason:

12)

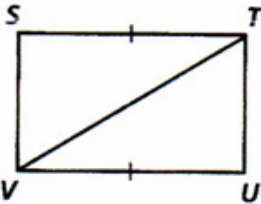


Congruence:

$\Delta HJK \cong \Delta$ _____

Reason:

13)

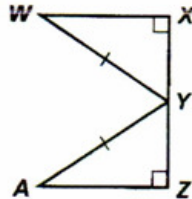


Congruence:

$\Delta STV \cong \Delta$ _____

Reason:

14)

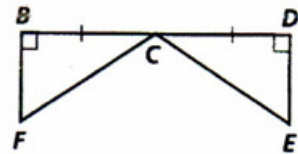


Congruence:

$\Delta WXY \cong \Delta$ _____

Reason:

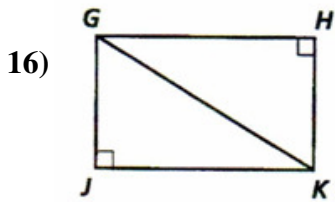
15)



Congruence:

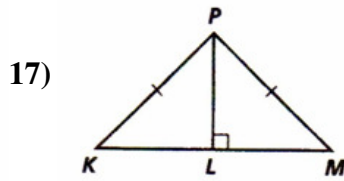
$\Delta BCF \cong \Delta$ _____

Reason:



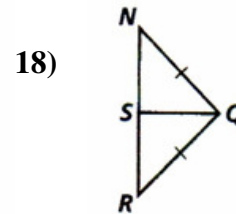
Congruence:
 $\triangle GJK \cong \triangle$ _____

Reason:



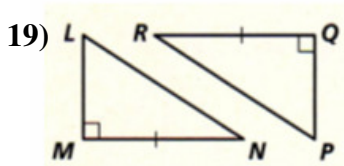
Congruence:
 $\triangle KLP \cong \triangle$ _____

Reason:



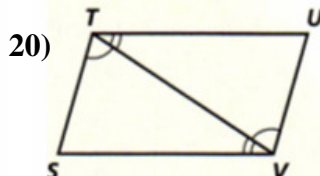
Congruence:
 $\triangle NSQ \cong \triangle$ _____

Reason:



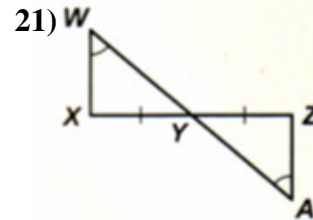
Congruence:
 $\triangle LMN \cong \triangle$ _____

Reason:



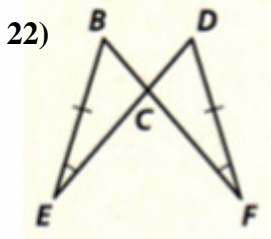
Congruence:
 $\triangle STV \cong \triangle$ _____

Reason:



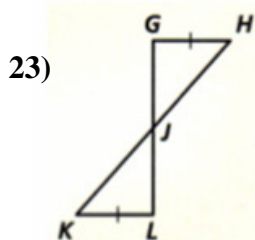
Congruence:
 $\triangle WXY \cong \triangle$ _____

Reason:



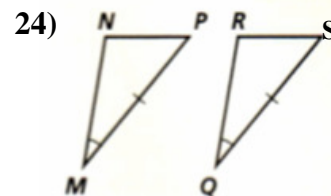
Congruence:
 $\triangle BCE \cong \triangle$ _____

Reason:



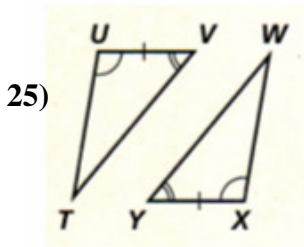
Congruence:
 $\triangle GHJ \cong \triangle$ _____

Reason:



Congruence:
 $\triangle NPM \cong \triangle$ _____

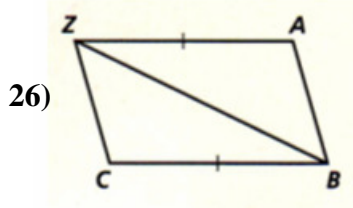
Reason:



Congruence:

$\Delta TUV \cong \Delta$ _____

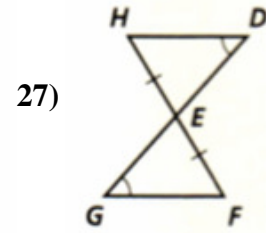
Reason:



Congruence:

$\Delta BCZ \cong \Delta$ _____

Reason:

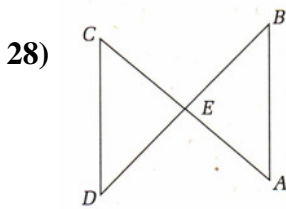


Congruence:

$\Delta EFG \cong \Delta$ _____

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.”

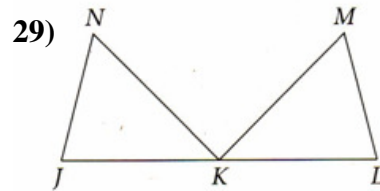


Given: $\overline{CD} \cong \overline{AB}$; $\angle B \cong \angle D$

Congruence:

$\Delta CDE \cong \Delta$ _____

Reason:

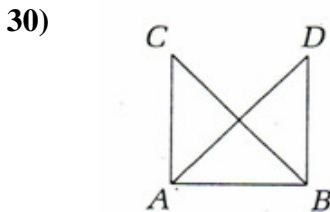


Given: $\overline{JN} \cong \overline{LM}$; $\overline{NK} \cong \overline{MK}$;
 $\angle N \cong \angle M$

Congruence:

$\Delta JKN \cong \Delta$ _____

Reason:

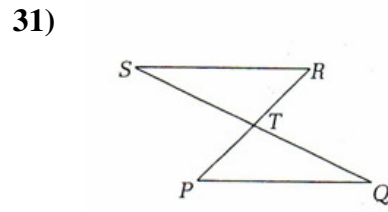


Given: $\overline{AC} \cong \overline{BD}$; $\overline{AD} \cong \overline{BC}$

Congruence:

$\Delta ABC \cong \Delta$ _____

Reason:



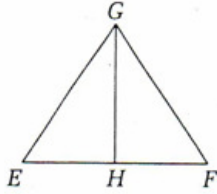
Given: \overline{SQ} and \overline{PR} bisect each other

Congruence:

$\Delta RST \cong \Delta$ _____

Reason:

32)



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

Congruence: $\triangle EGH \cong \triangle$ _____

Reason:

Now choose one of the problems from 28-32 and create a flow chart proof. Then transform your flow chart proof into a 2 column proof. Your “given” will be the “Given” from the problem and your “prove” will be the “Congruence” statement you created.