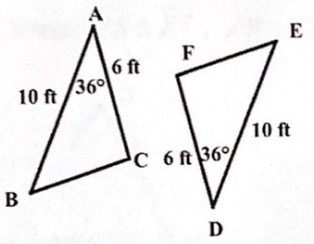
Name: KEY Date: _____ Period: _____

Unit 4 – Triangle Congruent Celebration Review – 2021

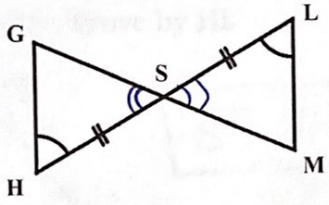
Directions: Decide if the two triangles are congruent using AAS, ASA, SSS, HL, or SAS. If they are, write the triangle congruent statement. If they are not, explain why.

1.



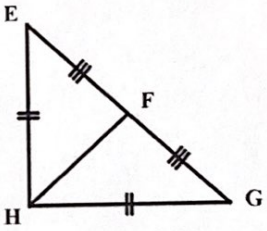
SAS
$\triangle ABC \cong \triangle DEF$

2.



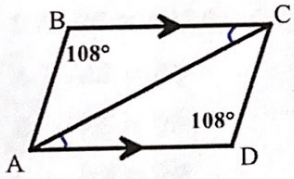
ASA
$\triangle GHS \cong \triangle MLS$

3.



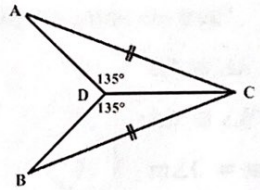
SSS
$\triangle EFH \cong \triangle GFH$

4.



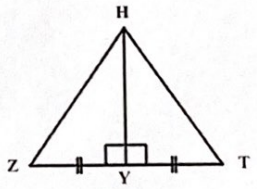
AAS
$\triangle ABC \cong \triangle CDA$

5.



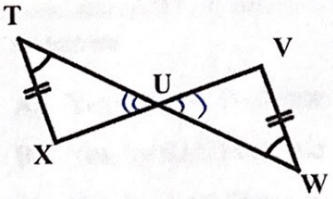
NEI

6.



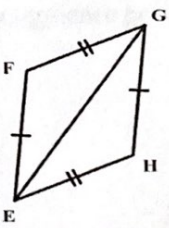
SAS
$\triangle ZYH \cong \triangle TYH$

7.



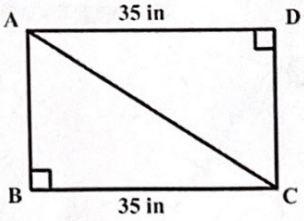
AAS
$\triangle TUX \cong \triangle WUV$

8.



SSS
$\triangle EFG \cong \triangle GHE$

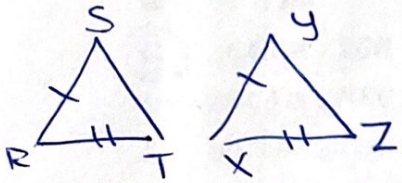
9.



HL
$\triangle ABC \cong \triangle CDA$

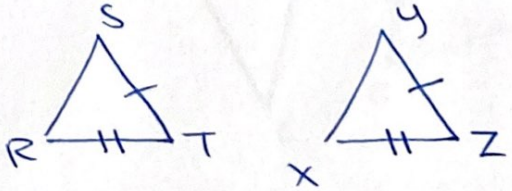
State the 3rd congruence that must be given to prove that $\triangle RST \cong \triangle XYZ$, using the indicated method. (what other corresponding parts are needed) if possible.

10. Given: $\overline{RS} \cong \overline{XY}$, $\overline{TR} \cong \overline{ZX}$, Prove by SAS



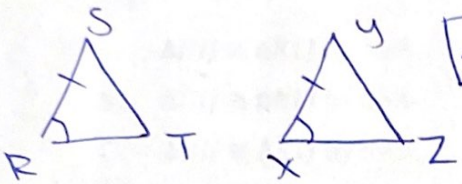
$\angle R \cong \angle X$

11. Given: $\overline{YZ} \cong \overline{ST}$, $\overline{ZX} \cong \overline{TR}$, Prove by SSS



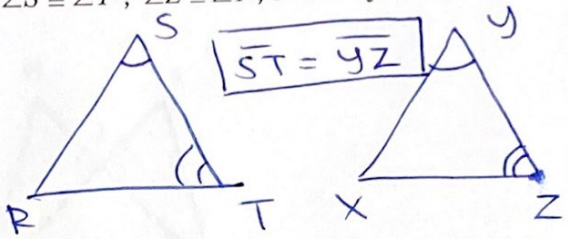
$\overline{RS} \cong \overline{XY}$

12. Given: $\angle R \cong \angle X$, $\overline{RS} \cong \overline{XY}$, Prove by AAS



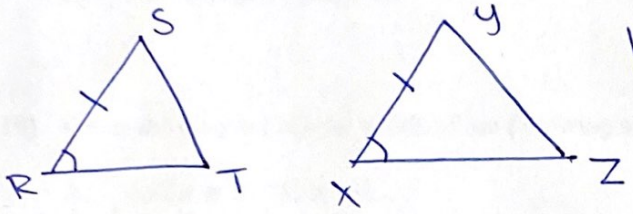
$\angle T \cong \angle Z$

13. Given: $\angle S \cong \angle Y$, $\angle Z \cong \angle T$, Prove by ASA



$\overline{ST} = \overline{yz}$

14. Given: $\overline{RS} \cong \overline{XY}$, $\angle R \cong \angle X$, $m\angle R = 90^\circ$, Prove by HL



$\overline{ST} \cong \overline{yz}$

Multiple Choice Section:

15) If $\Delta ABC \cong \Delta QRP$, select all of the following that are true?

ABC
QRP

A. $AB = RQ$

B. $\overline{AC} \cong \overline{QP}$

C. $\overline{BA} \cong \overline{RP}$

D. $\angle A \cong \angle R$

E. $\angle B \cong \angle P$

F. $m\angle C = m\angle P$

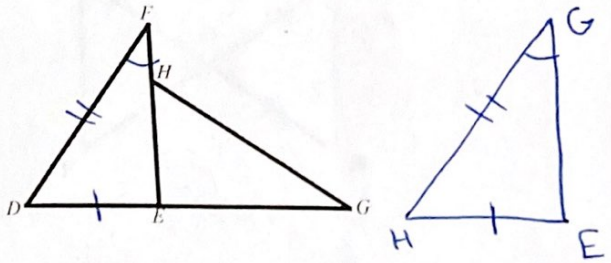
16) In the figure below, $DE = EH$, $\overline{GH} \cong \overline{DF}$, and $\angle F \cong \angle G$. Is there enough information to conclude $\Delta DEF \cong \Delta HEG$? If so, state the congruence postulate that supports the congruence statement.

A. Yes, by SSA Postulate

B. Yes, by SAS Postulate

C. Yes, by AAS Theorem

D. No, not enough information



17) In the figure $\angle ABC \cong \angle KHG$ and $\overline{AB} \cong \overline{GH}$. What information is needed to prove that $\Delta AGE \cong \Delta OLD$ by ASA?

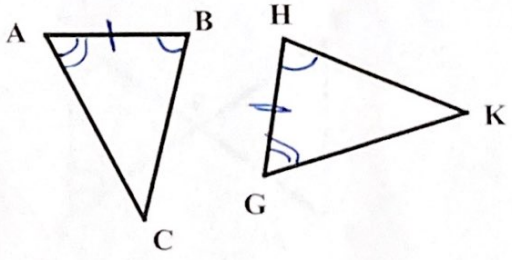
A. $\overline{AB} \cong \overline{GH}$

B. $\overline{BC} \cong \overline{HK}$

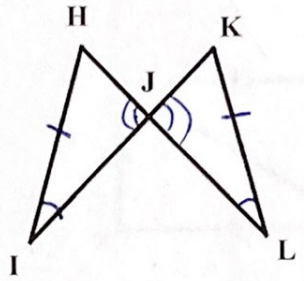
C. $\angle CAB \cong \angle KGH$

D. $\angle BCA \cong \angle HKG$

E. Not Enough Information



18) In the figure $\angle I \cong \angle L$ and $HI = LK$. Which of the following statements is about congruence is true?



A. $\Delta HIJ \cong \Delta KLJ$ by ASA

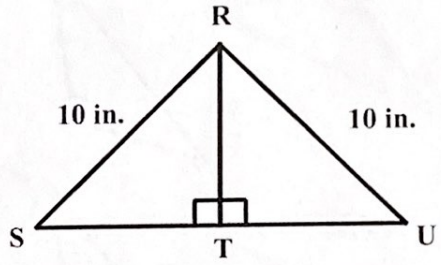
B. $\Delta HIJ \cong \Delta KLJ$ by SSA

C. $\Delta HIJ \cong \Delta KLJ$ by SAS

D. $\Delta HIJ \cong \Delta KLJ$ by AAS

E. Not Enough Information

19) Given the diagram below, which of the following statements is about congruence is true?



A. $\Delta STR \cong \Delta RTU$ by HL

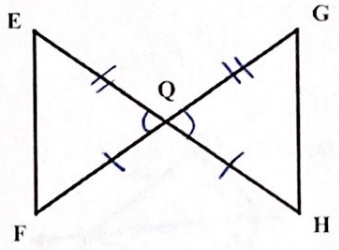
B. $\Delta STR \cong \Delta UTR$ by HL

C. $\Delta STR \cong \Delta RTU$ by SAS

D. $\Delta STR \cong \Delta UTR$ by SAS

E. Not Enough Information

20) What information is needed to prove $\Delta DAB \cong \Delta DCB$ by SAS? Select all that you would need.



A. $\overline{QF} \cong \overline{QH}$

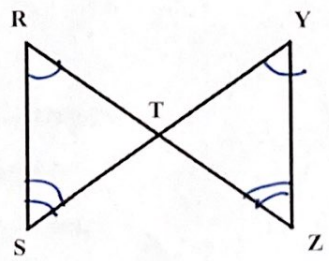
B. $\overline{EQ} \cong \overline{GQ}$

C. $\angle EQF \cong \angle GQH$

D. $\overline{EF} \cong \overline{GH}$

E. Not Enough Information

21) In the figure below, $\angle R \cong \angle Y$, and $\angle S \cong \angle Z$, Is there enough information to conclude $\Delta RST \cong \Delta YZT$? If so, state the congruence postulate that supports the congruence statement.



A. Yes, by SAA

B. Yes, by SAS

C. Yes, by ASA

D. Yes, by AAS

E. Not Enough Information

22) Refer To the figure to complete the congruence statement, $\Delta NLP \cong$ _____ because of _____. Select the two letters that would complete the statement.

A. ΔLMN

B. ΔNML

C. ΔLNM

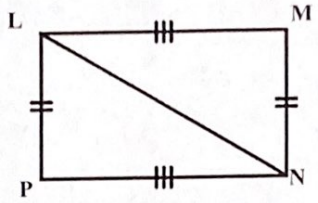
D. ΔMLN

E. SSS Congruence

F. SAS Congruence

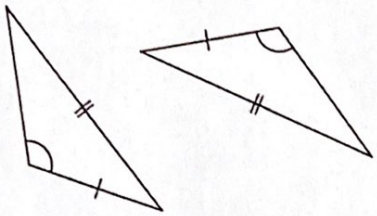
G. SSA Congruent

H. HL Congruence

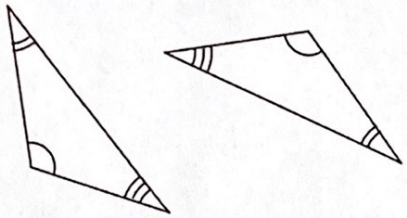


23) Which of the following sets of triangles can be proved congruent using the AAS Theorem?

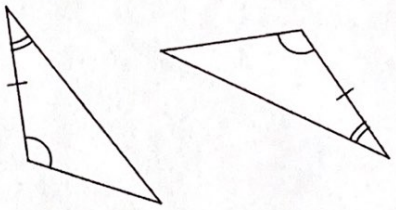
A.



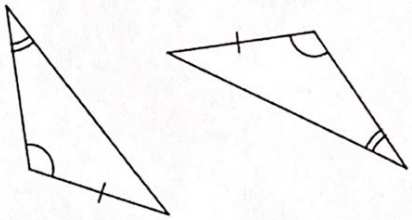
B.



C.



D.



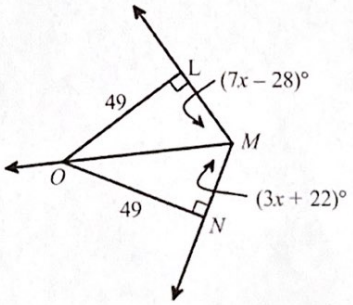
24) Use the diagram below to find $m\angle LMN$.

A. $m\angle LMN = 119°$

B. $m\angle LMN = 104°$

C. $m\angle LMN = 98°$

D. $m\angle LMN = 84°$



25) What does CPCTC stand for?

A. Congruent Pieces of Complementary Triangles are Corresponding.

B. Congruent Parts of Corresponding Triangles are Congruent.

C. Corresponding Parts of Congruent Triangles are Congruent.

D. Corresponding Pieces of Congruent Triangles are Complementary.