

Name _____

Date _____

Congruent Triangle Guided Practice

Part I: State the third congruence that must be given to prove the given triangles congruent using the indicated postulate or theorem.

(1) $\overline{AB} \cong \overline{XY}$; $\overline{AC} \cong \overline{XZ}$; _____; $\triangle ABC \cong \triangle XYZ$ by SSS.

(2) $\overline{PQ} \cong \overline{AB}$; $\overline{QR} \cong \overline{BC}$; _____; $\triangle PQR \cong \triangle ABC$ by SAS.

(3) $\angle D \cong \angle G$; $\angle F \cong \angle I$; _____; $\triangle DEF \cong \triangle GHI$ by ASA.

(4) $\angle P \cong \angle A$; $\angle R \cong \angle C$; _____; $\triangle ABC \cong \triangle PQR$ by AAS.

(5) $\overline{BD} \cong \overline{SU}$; $\angle D \cong \angle U$; _____; $\triangle BCD \cong \triangle STU$ by AAS.

(6) $\overline{MN} \cong \overline{TU}$; $\angle N \cong \angle U$; _____; $\triangle MNO \cong \triangle TUV$ by SAS.

(7) $\overline{JL} \cong \overline{EG}$; $\overline{KL} \cong \overline{FG}$; _____; $\triangle JKL \cong \triangle EFG$ by SAS.

(8) $\overline{FG} \cong \overline{IJ}$; $\overline{EG} \cong \overline{HJ}$; _____; $\triangle EFG \cong \triangle HIJ$ by SSS.

(9) $\overline{JK} \cong \overline{WX}$; $\angle K \cong \angle X$; _____; $\triangle JKL \cong \triangle WXY$ by ASA.

(10) $\angle P \cong \angle S$; $\overline{PR} \cong \overline{SU}$; _____; $\triangle PQR \cong \triangle STU$ by ASA.

Part II: For each pair of triangles, determine if they can be proven congruent and state the congruence postulate or theorem that justifies your answer. If the triangles cannot be proven congruent write "not possible."






