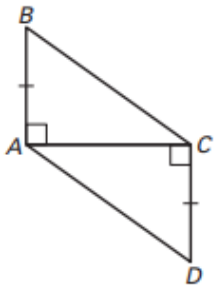
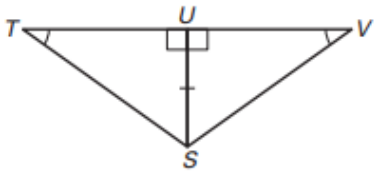
Geometry – Worksheet 4.6 **Name:**

Tell which triangles you can show are congruent in order to prove the statement. What postulate or theorem would you use?

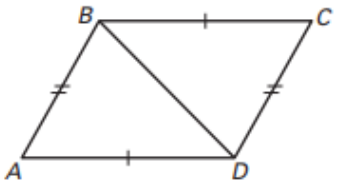
1. $\overline{BC} \cong \overline{AD}$



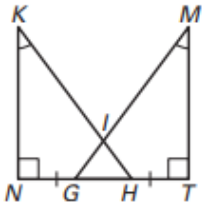
2. $\angle TSU \cong \angle VSU$



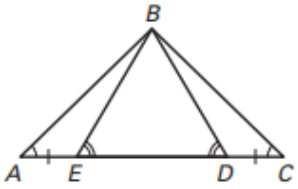
3. $\angle ADB \cong \angle CBD$



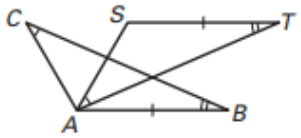
4. $\angle KHN \cong \angle MGT$



5. $\overline{BD} \cong \overline{BE}$



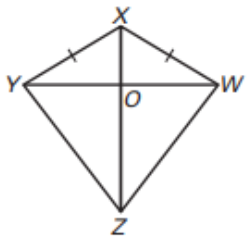
6. $\overline{BC} \cong \overline{AT}$



11. Proof Complete the proof.

GIVEN: $\overline{YX} \cong \overline{WX}$
$\overline{ZX}$ bisects $\angle YXW$.

PROVE: $\overline{YZ} \cong \overline{WZ}$



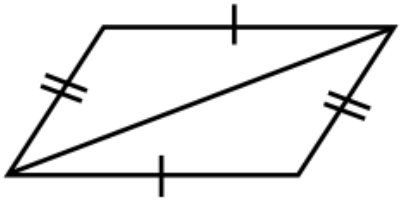
Statements	Reasons
1. $\overline{YX} \cong \overline{WX}$	**1.** ?
2. $\overline{ZX}$ bisects $\angle YXW$.	**2.** ?
3. $\angle YXZ \cong \angle WXZ$	**3.** ?
4. $\overline{XZ} \cong \overline{XZ}$	**4.** ?
5. $\triangle YXZ \cong \triangle WXZ$	**5.** ?
6. $\overline{YZ} \cong \overline{WZ}$	**6.** ?

Identifying Triangle Congruency Methods

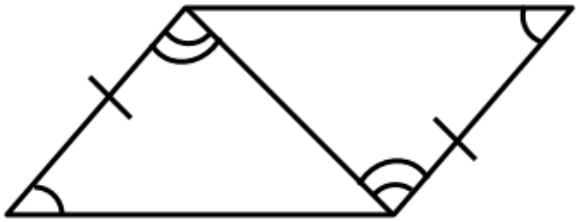
Decide whether enough information is given to prove that the triangles are congruent by one or more methods.

- If so, use SSS, SAS, ASA, AAS, and/or HL to list all of the possible methods. Be sure to state and apply any extra information or assumptions that you can make that would give you more methods.
- If no method is possible, write "not possible" and explain why.

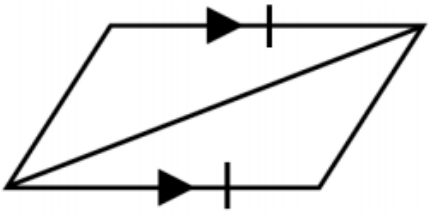
1. Method(s): _____



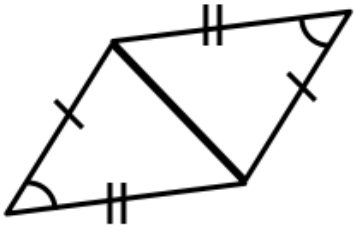
2. Method(s): _____



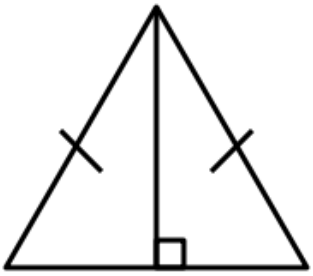
3. Method(s): _____



4. Method(s): _____



5. Method(s): _____



6. Method(s): _____