Assignment

LESSON 3: I Never Forget a Face

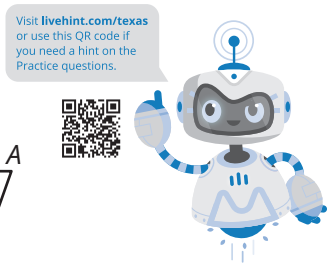
Write

Explain in your own words how to determine which congruence theorem to use to identify congruent triangles.

Remember

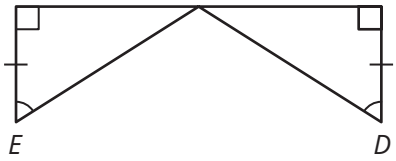
The SSS, SAS, and ASA criteria for triangle congruence can be applied on and off the coordinate plane to solve real-world and mathematical problems.

Practice

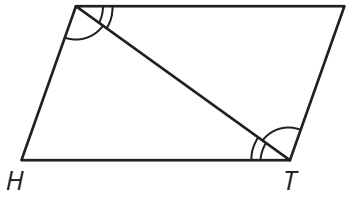


1. State the theorem that proves the triangles are congruent. Then write a congruence statement.

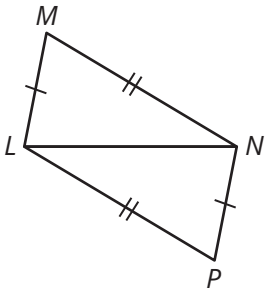
a.



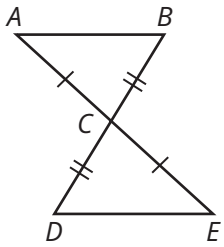
b.



c.

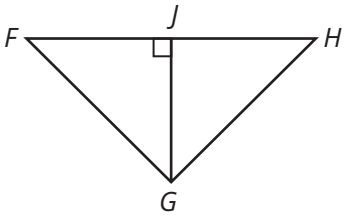


d.

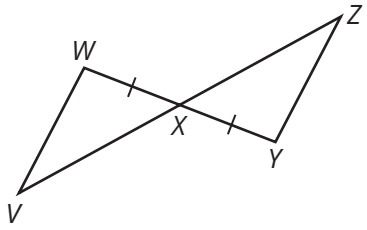


2. Determine the information that is needed to use the indicated theorem to show that the triangles are congruent.

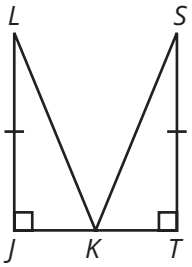
a. $\triangle FJG \cong \triangle HJG$ by SAS



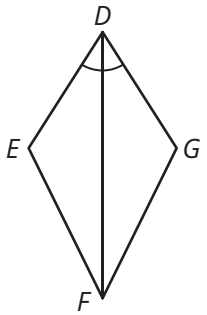
b. $\triangle VMX \cong \triangle ZYX$ by ASA



c. $\triangle KJL \cong \triangle KTS$ by SAS

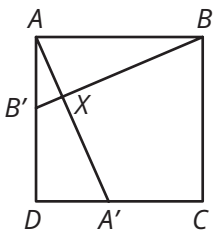


d. $\triangle DEF \cong \triangle DGF$ by ASA



Stretch

Figure *ABCD* is a square. The line segments *AA'* and *BB'* are perpendicular to each other. Determine how it can be proven that $\triangle ABB' \cong \triangle DAA'$ using either SAS, SSS, or ASA.

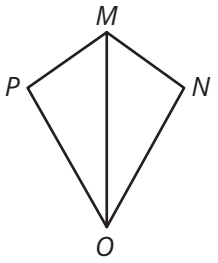


Review

1. Draw two triangles that correspond with the congruence statement $\triangle MTA \cong \triangle BGC$. Then list the six pairs of congruent corresponding parts.
2. For the figure shown, determine whether there is enough information to conclude that the triangles are congruent. If so, state the theorem you used.

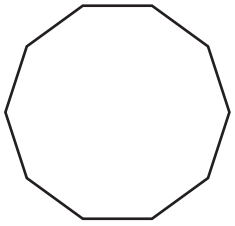
   Given: $\angle MOP \cong \angle MON$

   Is $\triangle POM \cong \triangle NOM$?

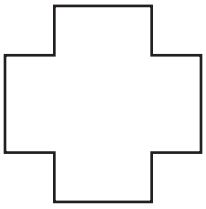


3. Describe the sequence of rotations and/or reflections that can carry each figure onto itself. Use the figure's reflectional and rotational symmetry, if any, to justify your answer.

   a.



   b.



4. Use the dark points to determine the location of the vertices of a square.