



## 4-4 Solve It!



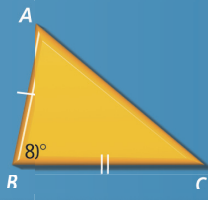
Now you know four ways to prove triangles congruent. When you know triangles are congruent, you know a lot about them.



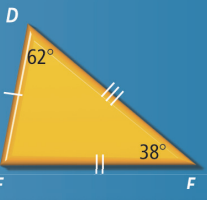
**Getting Ready!**

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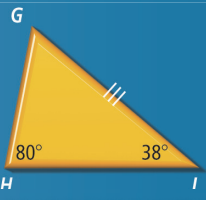
Is  $\triangle ABC$  congruent to  $\triangle GHI$ ? How do you know?



$\triangle ABC$



$\triangle DEF$

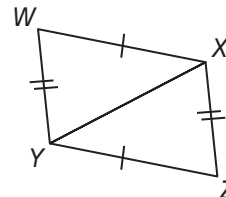


$\triangle GHI$

## 4-4 Lesson Quiz

**1. Given:**  $\overline{WX} \cong \overline{ZY}$ ,  $\overline{WY} \cong \overline{ZX}$

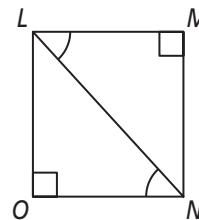
**Prove:**  $\angle W \cong \angle Z$



**2. Do you UNDERSTAND?**

**Given:**  $\angle ONL \cong \angle MLN$ ,  $\angle O$  and  $\angle M$  are right angles.

**Prove:**  $\overline{LM} \cong \overline{NO}$



## Answers

### Solve It!

Answers may vary. Sample:  $m\angle E = 80$  and  $m\angle G = 62$  by the Triangle Angle-Sum Theorem. So  $\triangle ABC \cong \triangle DEF$  by SAS and  $\triangle DEF \cong \triangle GHI$  by AAS or ASA. Since both  $\triangle ABC$  and  $\triangle GHI$  are  $\cong$  to  $\triangle DEF$ , they are  $\cong$  to each other by the Transitive Prop. of  $\cong$ .

### Lesson Quiz

**1.** It is given that  $\overline{WX} \cong \overline{ZY}$  and  $\overline{WY} \cong \overline{ZX}$ .  $\overline{XY} \cong \overline{XY}$  by the Reflexive Property of Congruence. So,  $\triangle WXY \cong \triangle ZYX$  by the SSS Postulate. So,  $\angle W \cong \angle Z$  because they are corresponding parts of congruent triangles.

**2.** It is given that  $\angle ONL \cong \angle MLN$  and  $\angle O$  and  $\angle M$  are right angles. So,  $\angle O \cong \angle M$  because all right angles are congruent. So,  $\triangle ONL \cong \triangle MLN$  by AAS.  $\overline{LM} \cong \overline{NO}$  because they are corresponding parts of congruent triangles.