

# 4-3

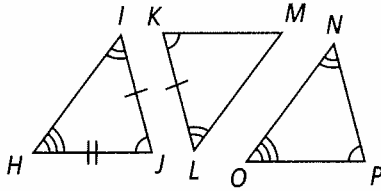
## Practice

Form G

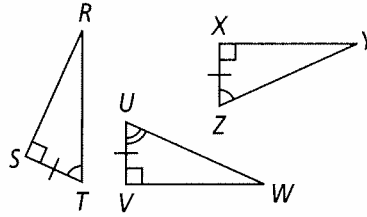
### Triangle Congruence by ASA and AAS

Name two triangles that are congruent by ASA.

1.



2.



3. **Developing Proof** Complete the proof by filling in the blanks.

**Given:**  $\angle HIJ \cong \angle KIJ$

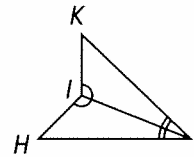
$\angle IJH \cong \angle IJK$

**Prove:**  $\triangle HIJ \cong \triangle KIJ$

**Proof:**  $\angle HIJ \cong \angle KIJ$  and  $\angle IJH \cong \angle IJK$  are given.

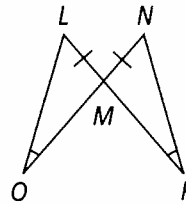
$\overline{IJ} \cong \overline{IJ}$  by ?.

So,  $\triangle HIJ \cong \triangle KIJ$  by ?.



4. **Given:**  $\angle LOM \cong \angle NPM$ ,  $\overline{LM} \cong \overline{NM}$

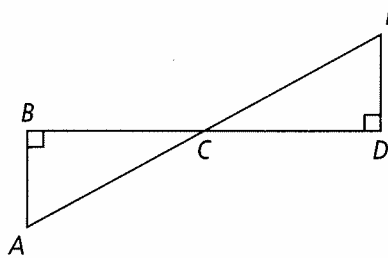
**Prove:**  $\triangle LOM \cong \triangle NPM$



5. **Given:**  $\angle B$  and  $\angle D$  are right angles.

$\overline{AE}$  bisects  $\overline{BD}$

**Prove:**  $\triangle ABC \cong \triangle EDC$



# 4-3

## Practice (continued)

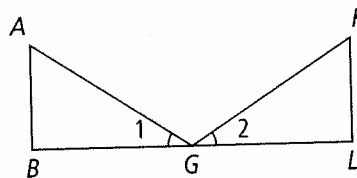
Form G

### Triangle Congruence by ASA and AAS

6. **Developing Proof** Complete the proof.

**Given:**  $\angle 1 \cong \angle 2$ ,  $\overline{AB} \perp \overline{BL}$ ,  $\overline{KL} \perp \overline{BL}$ ,  $\overline{AB} \cong \overline{KL}$

**Prove:**  $\triangle ABG \cong \triangle KLG$

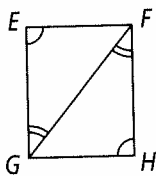


**Proof:**

$\overline{AB} \perp \overline{BL}$	→	∠B is a right ∠.		∠1 ≅ ∠2		△ABG ≅ △KLG
$\overline{KL} \perp \overline{BL}$	→	∠L is a right ∠.	→	∠B ≅ ∠L	→	
			→	∠B ≅ ∠L	→	

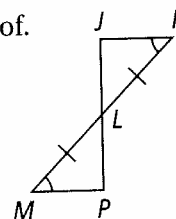
7. Write a flow proof.

**Given:**  $\angle E \cong \angle H$   
 $\angle HFG \cong \angle EGF$   
**Prove:**  $\triangle EGF \cong \triangle HFG$



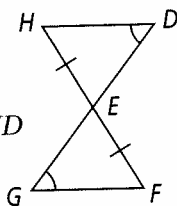
8. Write a two-column proof.

**Given:**  $\angle K \cong \angle M$   
 $\overline{KL} \cong \overline{ML}$   
**Prove:**  $\triangle JKL \cong \triangle PML$



For Exercises 9 and 10, write a paragraph proof.

9. **Given:**  $\angle D \cong \angle G$   
 $\overline{HE} \cong \overline{FE}$   
**Prove:**  $\triangle EFG \cong \triangle EHD$



10. **Given:**  $\overline{JM}$  bisects  $\angle J$ .  
 $\overline{JM} \perp \overline{KL}$   
**Prove:**  $\triangle JMK \cong \triangle JML$

