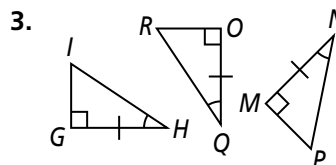
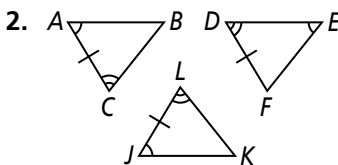
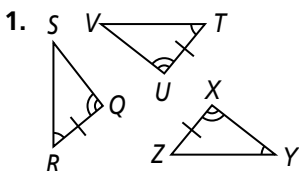


# Practice

Form K

## Triangle Congruence by ASA and AAS

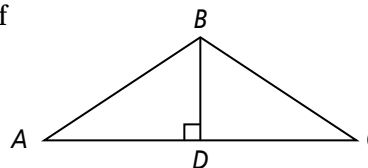
Name the two triangles that are congruent by ASA.



4. **Developing Proof** Complete the two-column proof by filling in the blanks.

**Given:**  $\overline{BD} \perp \overline{AC}$ ,  $\overline{BD}$  bisects  $\angle ABC$

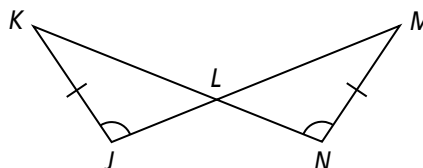
**Prove:**  $\triangle ABD \cong \triangle CBD$



Statements	Reasons
1) $\overline{BD} \perp \overline{AC}$ , $\overline{BD}$ bisects $\angle ABC$ .	1) Given
2) ?	2) Definition of perpendicular
3) $\angle ADB \cong \angle CDB$	3) ?
4) $\angle ABD \cong \angle CBD$	4) ?
5) ?	5) Reflexive Property of $\cong$
6) ?	6) ASA

5. **Given:**  $\overline{KJ} \cong \overline{MN}$ ,  $\angle KJL \cong \angle MNL$

**Prove:**  $\triangle JKL \cong \triangle NML$



Statements	Reasons
1) $\overline{KJ} \cong \overline{MN}$ , $\angle KJL \cong \angle MNL$	1) Given
2) $\angle KLJ \cong \angle MLN$	2) ?
3) ?	3) Third Angles Theorem
4) ?	4) ASA

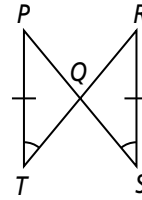
**Practice** (continued)

Form K

Triangle Congruence by ASA and AAS

6. **Given:**  $\overline{PT} \cong \overline{RS}$ ,  $\angle PTR \cong \angle RSP$

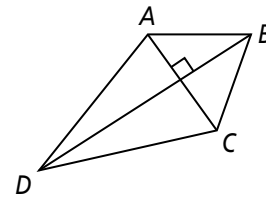
**Prove:**  $\triangle PQT \cong \triangle RQS$



Statements	Reasons
1) <u>  ?</u>	1) Given
2) $\angle PQT \cong \angle RQS$	2) <u>  ?</u>
3) <u>  ?</u>	3) AAS

7. **Given:**  $\overline{BD}$  is the angle bisector of  $\angle ABC$  and  $\angle ADC$ .

**Prove:**  $\triangle ABD \cong \triangle CBD$



Statements	Reasons
1) <u>  ?</u>	1) <u>  ?</u>
2) <u>  ?</u>	2) Definition of $\angle$ bisector
3) $\angle BAD \cong \angle BCD$	3) <u>  ?</u>
4) $\overline{BD} \cong \overline{BD}$	4) <u>  ?</u>
5) <u>  ?</u>	5) AAS

8. **Reasoning** A student tells you that he can prove the AAS Theorem using the SAS Postulate and the Third Angles Theorem. Do you agree with him? Explain. (Hint: How many pairs of sides does the SAS Postulate use?)

9. **Reasoning** Can you prove the triangles congruent? Justify your answer.

