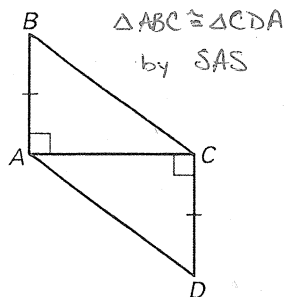


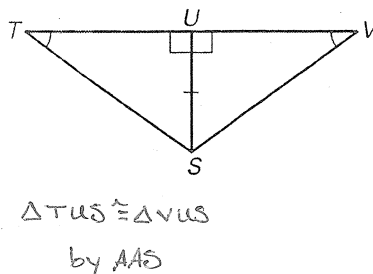
**LESSON 4.7** **Practice B**  
For use with the lesson "Use Congruent Triangles"

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

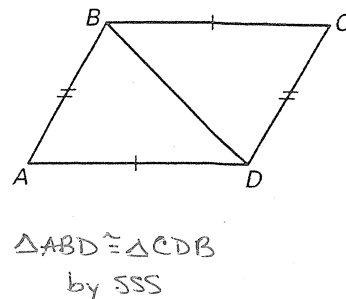
1.  $\overline{BC} \cong \overline{AD}$



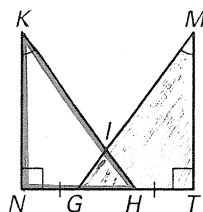
2.  $\angle TSU \cong \angle VSU$



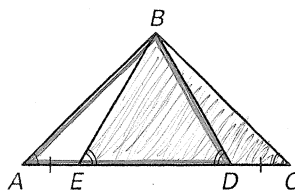
3.  $\angle ADB \cong \angle CBD$



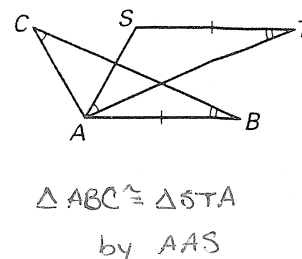
4.  $\angle KHN \cong \angle MGT$



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



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



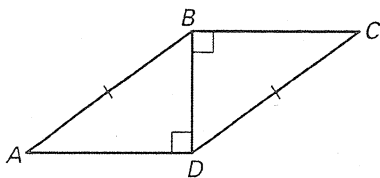
$\Delta KNH \cong \Delta MTG$  by AAS

$\Delta ABD \cong \Delta CBE$  by ASA

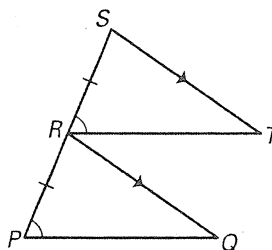
$\Delta ABC \cong \Delta STA$  by AAS

Use the diagram to write a plan for a proof.

7. PROVE:  $\angle DAB \cong \angle BCD$



8. PROVE:  $\overline{ST} \cong \overline{RQ}$



- ①  $\overline{AB} \cong \overline{CD}$       ① Given
- ∠CBD and ∠ADB are rt ∠'s
- ②  $\Delta CBD$  and  $\Delta ADB$  are rt  $\Delta$ 's      ② Def of rt  $\Delta$ 's
- ③  $\overline{BD} \cong \overline{BD}$       ③ Refl. Prop
- ④  $\Delta ADB \cong \Delta CBD$       ④ HL  $\cong$  Thm
- ⑤  $\angle DAB \cong \angle BCD$       ⑤ CPCTC

- ①  $\overline{SR} \cong \overline{RP}$       ① Given
- $\overline{SR} \parallel \overline{RQ}$       formula
- $\angle SRT \cong \angle RPQ$
- ②  $\angle TSR \cong \angle QRP$       ② Corr  $\angle$ 's  $\cong$  Post      formula
- ③  $\Delta SRT \cong \Delta RPQ$       ③ ASA
- ④  $\overline{ST} \cong \overline{RQ}$       ④ CPCTC

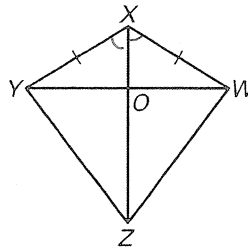
**LESSON**  
**4.7**

**Practice B** *continued*  
For use with the lesson "Use Congruent Triangles"

11. **Proof** Complete the proof.

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

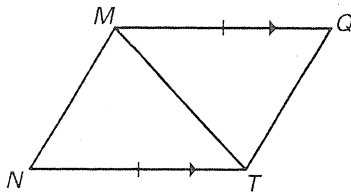
**PROVE:**  $\overline{YZ} \cong \overline{WZ}$



Statements	Reasons
⑤ 1. $\overline{YX} \cong \overline{WX}$	1. ? Given
2. $\overline{ZX}$ bisects $\angle YXW$ .	2. ? Given
Ⓐ 3. $\angle YXZ \cong \angle WXZ$	3. ? Def of <sup>angle</sup> <del>segment</del> bisector
⑤ 4. $\overline{XZ} \cong \overline{XZ}$	4. ? Reflexive Prop.
5. $\triangle YXZ \cong \triangle WXZ$	5. ? SAS $\cong$ Post
6. $\overline{YZ} \cong \overline{WZ}$	6. ? CPCTC

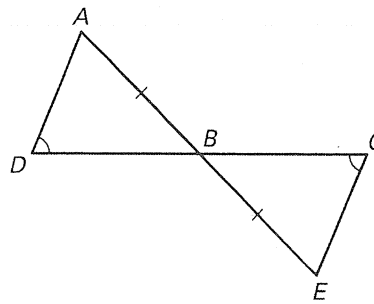
Use the information given in the diagram to write a proof.

12. **PROVE:**  $\overline{MN} \cong \overline{TQ}$



- ⑤ ①  $\overline{MQ} \cong \overline{NT}$ ,  $\overline{MQ} \parallel \overline{NT}$       ① Given
- Ⓐ ②  $\angle QMT \cong \angle NTM$       ② Alt Int  $\angle$ 's Thm
- ⑤ ③  $\overline{MT} \cong \overline{MT}$       ③ Refl. Prop.
- ④  $\triangle MQT \cong \triangle TNM$       ④ SAS  $\cong$  Post
- ⑤  $\overline{MN} \cong \overline{TQ}$       ⑤ CPCTC

13. **PROVE:**  $\overline{DB} \cong \overline{CB}$



- Ⓐ ⑤ ①  $\angle D \cong \angle C$ ,  $\overline{AB} \cong \overline{BE}$       ① Given
- Ⓐ ②  $\angle ABD \cong \angle CBE$       ② Vert  $\angle$ 's  $\cong$  Thm
- ③  $\triangle ABD \cong \triangle ECB$       ③ AAS  $\cong$  Thm
- ④  $\overline{DB} \cong \overline{CB}$       ④ CPCTC