## Practice 4.4 Programmer Practice For use with pages 240–247

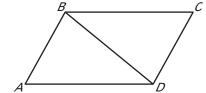
Use the diagram to name the included angle between the given pair of sides.

**1.**  $\overline{AB}$  and  $\overline{BC}$ 

**2.**  $\overline{BC}$  and  $\overline{CD}$ 

**3.**  $\overline{AB}$  and  $\overline{BD}$ 

**4.**  $\overline{BD}$  and  $\overline{DA}$ 



**5.**  $\overline{DA}$  and  $\overline{AB}$ 

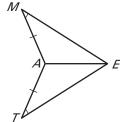
**6.**  $\overline{CD}$  and  $\overline{DB}$ 

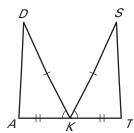
Decide whether enough information is given to prove that the triangles are congruent using the SAS Congruence Postulate.

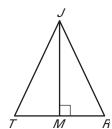
**7.**  $\triangle MAE$ ,  $\triangle TAE$ 



**9.**  $\triangle JRM$ ,  $\triangle JTM$ 

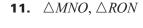




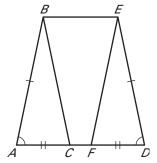


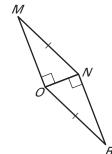
Decide whether enough information is given to prove that the triangles are congruent. If there is enough information, state the congruence postulate or theorem you would use.

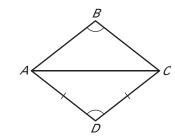
**10.**  $\triangle ABC$ ,  $\triangle DEF$ 



**12.**  $\triangle ABC$ ,  $\triangle ADC$ 



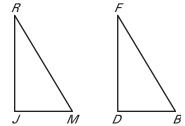




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State the third congruence that must be given to prove that  $\triangle \textit{JRM} \cong \triangle \textit{DFB}$  using the indicated postulate.

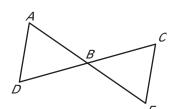
**13.** GIVEN:  $\overline{JR} \cong \overline{DF}$ ,  $\overline{JM} \cong \overline{DB}$ ,  $\underline{?} \cong \underline{?}$  Use the SSS Congruence Postulate.



- **14. GIVEN:**  $\overline{JR} \cong \overline{DF}$ ,  $\overline{JM} \cong \overline{DB}$ ,  $\underline{?} \cong \underline{?}$  Use the SAS Congruence Postulate.
- **15. GIVEN:**  $\overline{RM} \cong \overline{FB}$ ,  $\angle J$  is a right angle and  $\angle J \cong \angle D$ ,  $\underline{?} \cong \underline{?}$  Use the HL Congruence Theorem.
- **16. Proof** Complete the proof.

**Statements** 

**6.**  $\triangle ABD \cong \triangle EBC$ 



Reasons

**GIVEN:** *B* is the midpoint of  $\overline{AE}$ . *B* is the midpoint of  $\overline{CD}$ .

**PROVE:**  $\triangle ABD \cong \triangle EBC$ 

<b>1.</b> $B$ is the midpoint of $\overline{AE}$ .	<b>1.</b> <u>?</u>
<b>2.</b> _ ?	<b>2.</b> Definition of midpoint
<b>3.</b> $B$ is the midpoint of $\overline{CD}$ .	<b>3.</b> _ ?
<b>4.</b> _ ?	<b>4.</b> Definition of midpoint
<b>5.</b> $\angle ABD \cong \angle EBC$	<b>5.</b> _ ?

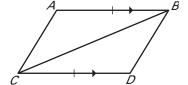
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**17. Proof** Complete the proof.

**GIVEN:**  $\overline{AB} \parallel \overline{CD}, \overline{AB} \cong \overline{CD}$ 

**PROVE:**  $\triangle ABC \cong \triangle DCB$ 



Statements	Reasons
<b>1.</b> $\overline{AB} \parallel \overline{CD}$	<b>1.</b> <u>?</u>
<b>2.</b> $\angle ABC \cong \angle DCB$	<b>2.</b> <u>?</u>
<b>3.</b> $\overline{AB} \cong \overline{CD}$	<b>3.</b> <u>?</u>
<b>4.</b> $\overline{CB} \cong \overline{CB}$	<b>4.</b> <u>?</u>
<b>5.</b> $\triangle ABC \cong \triangle DCB$	<b>5.</b> ?