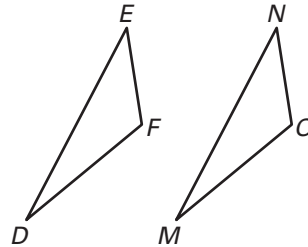




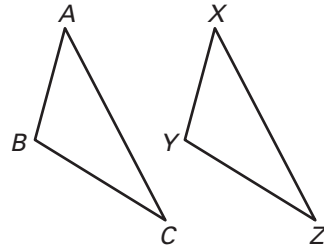
State the third congruence that is needed to prove that $\triangle DEF \cong \triangle MNO$ using the given postulate or theorem.

- GIVEN:** $\overline{DE} \cong \overline{MN}$, $\angle M \cong \angle D$, $\underline{\quad} \cong \underline{\quad}$
Use the SAS Congruence Postulate.
- GIVEN:** $\overline{FE} \cong \overline{ON}$, $\angle F \cong \angle O$, $\underline{\quad} \cong \underline{\quad}$
Use the AAS Congruence Theorem.
- GIVEN:** $\overline{DF} \cong \overline{MO}$, $\angle F \cong \angle O$, $\underline{\quad} \cong \underline{\quad}$
Use the ASA Congruence Postulate.



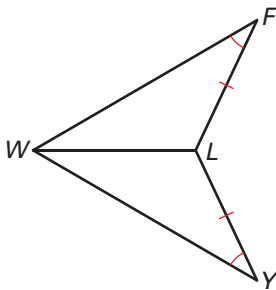
State the third congruence that is needed to prove that $\triangle ABC \cong \triangle XYZ$ using the given postulate or theorem.

- GIVEN:** $\angle A \cong \angle X$, $\angle B \cong \angle Y$, $\underline{\quad} \cong \underline{\quad}$
Use the AAS Congruence Theorem.
- GIVEN:** $\angle A \cong \angle X$, $\overline{AB} \cong \overline{XY}$, $\underline{\quad} \cong \underline{\quad}$
Use the ASA Congruence Postulate.
- GIVEN:** $\overline{BC} \cong \overline{YZ}$, $\angle C \cong \angle Z$, $\underline{\quad} \cong \underline{\quad}$
Use the AAS Congruence Theorem.

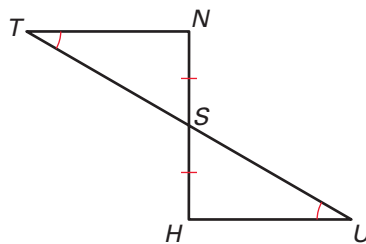


Is it possible to prove that the triangles are congruent? If so, state the postulate(s) or theorem(s) you would use.

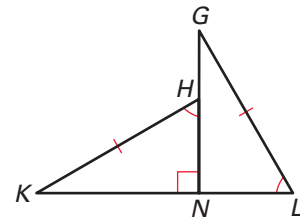
7.



8.



9.



10. **Error Analysis** Describe the error in concluding that $\triangle DEF \cong \triangle PQR$.

By AAA, $\triangle DEF \cong \triangle PQR$.

Exercise Set A *(continued)*

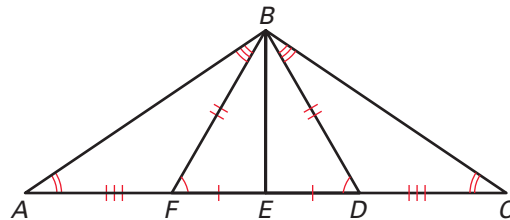
Tell whether you can use the given information to determine whether

$\triangle JRM \cong \triangle XYZ$. Explain your reasoning.

11. $\overline{JM} \cong \overline{XZ}$, $\angle M \cong \angle Z$, $\angle R \cong \angle Y$ 12. $\overline{JM} \cong \overline{XZ}$, $\overline{JR} \cong \overline{XY}$, $\angle J \cong \angle X$
 13. $\angle J \cong \angle X$, $\angle M \cong \angle Z$, $\angle R \cong \angle Y$ 14. $\angle M \cong \angle Z$, $\overline{JR} \cong \overline{XY}$, $\overline{RM} \cong \overline{YZ}$

Explain how you can prove that the indicated triangles are congruent using the given postulate or theorem.

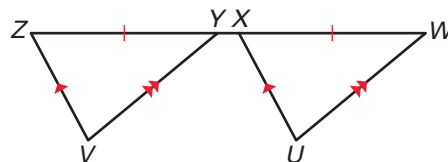
15. $\triangle BEF \cong \triangle BED$ by SAS
 16. $\triangle ADB \cong \triangle CFB$ by ASA
 17. $\triangle AFB \cong \triangle CDB$ by AAS



18. **Proof** Copy and complete the proof.

GIVEN: $\overline{WU} \parallel \overline{YV}$, $\overline{XU} \parallel \overline{ZV}$, $\overline{WX} \cong \overline{YZ}$

PROVE: $\triangle WXU \cong \triangle YZV$



Statements

Reasons

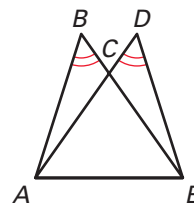
1. $\overline{WU} \parallel \overline{YV}$	1. ?
2. $\angle UWX \cong \angle VYZ$	2. ?
3. $\overline{XU} \parallel \overline{ZV}$	3. ?
4. $\angle UXW \cong \angle VZY$	4. ?
5. $\overline{WX} \cong \overline{YZ}$	5. ?
6. $\triangle WXU \cong \triangle YZV$	6. ?

19. **Multiple Representations** Use the figure at the right.

GIVEN: $\angle B \cong \angle D$, $\overline{DA} \cong \overline{BE}$, $\triangle ACE$ is equilateral.

PROVE: $\triangle ABC \cong \triangle EDC$

- a. **Writing a Two-Column Proof** Write a two-column proof using the AAS Congruence Theorem.
 b. **Writing a Paragraph Proof** Write a paragraph proof using the ASA Congruence Postulate.

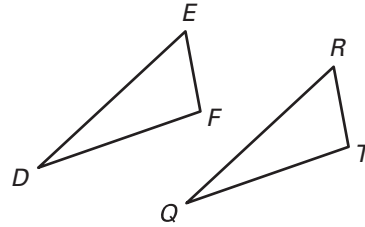




MM1G3c Understand and use congruence postulates and theorems for triangles (SSS, SAS, ASA, AAS, HL).

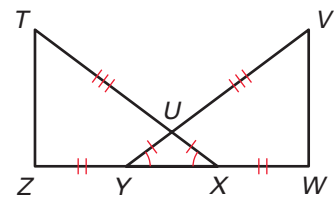
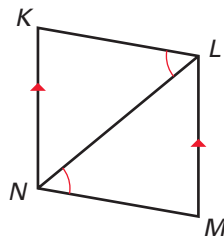
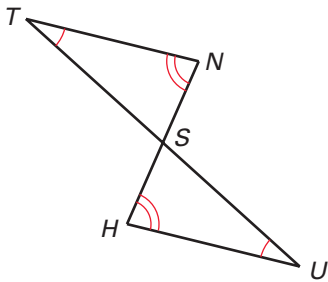
State the third congruence that is needed to prove that $\triangle DEF \cong \triangle QRT$ using the given postulate or theorem.

- GIVEN:** $\angle D \cong \angle Q$, $\angle F \cong \angle T$, $\underline{\quad} \cong \underline{\quad}$
Use the AAS Congruence Theorem.
- GIVEN:** $\angle E \cong \angle R$, $\overline{EF} \cong \overline{RT}$, $\underline{\quad} \cong \underline{\quad}$
Use the ASA Congruence Postulate.
- GIVEN:** $\overline{DE} \cong \overline{QR}$, $\angle D \cong \angle Q$, $\underline{\quad} \cong \underline{\quad}$
Use the SAS Congruence Postulate.



Is it possible to prove that the triangles are congruent? If so, state the postulate(s) or theorem(s) you would use.

- $\triangle TNS \cong \triangle UHS$
- $\triangle KLN \cong \triangle MNL$
- $\triangle TXZ \cong \triangle VYW$

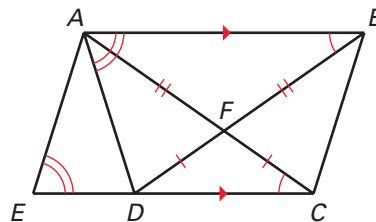


Tell whether you can use the given information to determine whether $\triangle JRM \cong \triangle XYZ$. Explain your reasoning.

- $\overline{JM} \cong \overline{XZ}$, $\angle M \cong \angle Y$, $\angle J \cong \angle X$
- $\overline{JM} \cong \overline{XZ}$, $\overline{JR} \cong \overline{YZ}$, $\angle J \cong \angle X$
- $\angle J \cong \angle X$, $\angle M \cong \angle Z$, $\overline{RM} \cong \overline{YZ}$
- $\overline{JR} \cong \overline{YZ}$, $\overline{RM} \cong \overline{XZ}$, $\overline{MJ} \cong \overline{XY}$

Explain how you can prove that the indicated triangles are congruent using the given postulate or theorem.

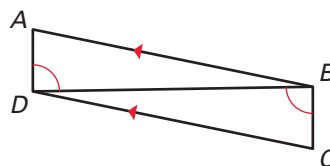
- $\triangle AFD \cong \triangle BFC$ by SAS
- $\triangle ACE \cong \triangle DBA$ by AAS
- $\triangle ACD \cong \triangle BDC$ by SAS



- Proof** Write a proof.

GIVEN: $\overline{AB} \parallel \overline{DC}$, $\angle ADB \cong \angle CBD$

PROVE: $\triangle ABD \cong \triangle CDB$

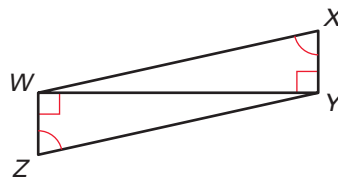


Exercise Set B (continued)

15. **Proof** Copy and complete the proof.

GIVEN: $\angle XYW \cong \angle ZWY$,
 $\angle WXY \cong \angle YZW$

PROVE: $\triangle XYW \cong \triangle ZWY$

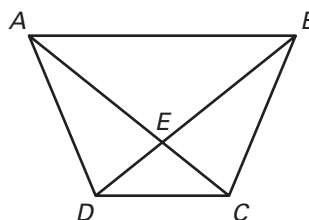


Statements	Reasons
1. $\angle XYW \cong \angle ZWY$	1. ?
2. $\angle WXY \cong \angle YZW$	2. ?
3. $\overline{WY} \cong \overline{WY}$	3. ?
4. $\triangle XYW \cong \triangle ZWY$	4. ?

16. **Proof** Copy and complete the proof.

GIVEN: $\overline{DE} \cong \overline{CE}$, $\angle ADE \cong \angle BCE$

PROVE: $\triangle AED \cong \triangle BEC$

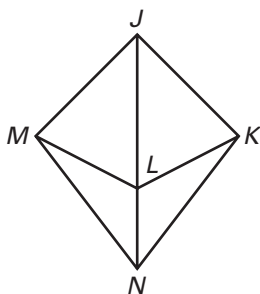


Statements	Reasons
1. $\overline{DE} \cong \overline{CE}$	1. ?
2. $\angle ADE \cong \angle BCE$	2. ?
3. $\angle AED \cong \angle BEC$	3. ?
4. $\triangle AED \cong \triangle BEC$	4. ?

17. **Proof** Write a proof.

GIVEN: $\overline{ML} \cong \overline{LK}$, $\angle MLJ \cong \angle KLJ$

PROVE: $\triangle MLN \cong \triangle KLN$



18. **Proof** Write a proof.

GIVEN: $\angle CAD \cong \angle BDA$, $\angle B \cong \angle C$

PROVE: $\triangle CDA \cong \triangle BAD$

