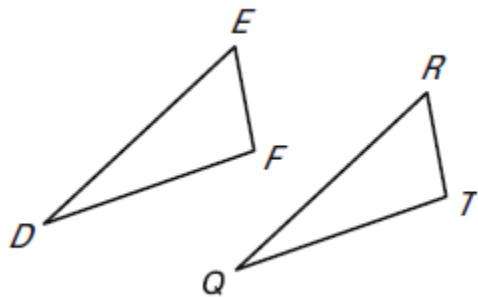


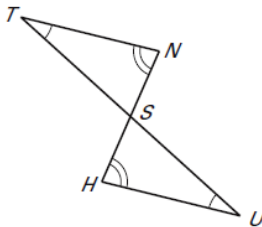
State the third congruence that is needed to prove that $\triangle DEF \cong \triangle QRT$ using the given postulate or theorem.

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

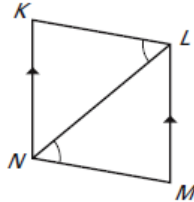


Is it possible to prove that the triangles are congruent? If so, state the postulate(s) or theorem(s) you would use.

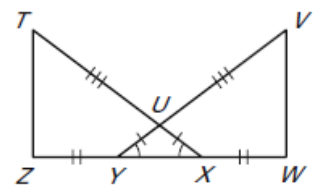
4. $\triangle TNS \cong \triangle UHS$



5. $\triangle KLN \cong \triangle MNL$



6. $\triangle TXZ \cong \triangle VYW$

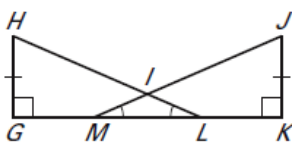


Tell whether you can use the given information to determine whether $\triangle JRM \cong \triangle XYZ$. Explain your reasoning. (Hint: You may want to draw a diagram ☺)

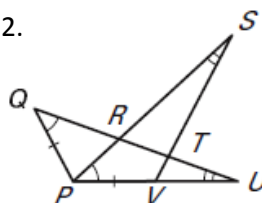
- $\overline{JM} \cong \overline{XZ}$, $\angle M \cong \angle Y$, $\angle J \cong \angle X$
- $\overline{JM} \cong \overline{XZ}$, $\overline{JR} \cong \overline{YZ}$, $\angle J \cong \angle X$
- $\angle J \cong \angle X$, $\angle M \cong \angle Z$, $\overline{RM} \cong \overline{YZ}$
- $\overline{JR}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

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

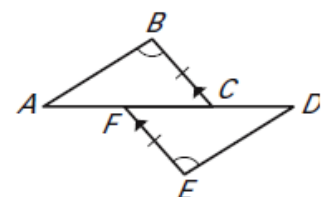
11.



12.



13.

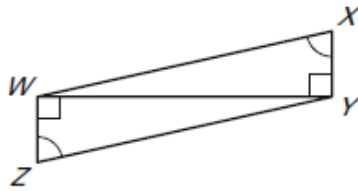


14. Complete the following proof.

Given: $\angle XYW \cong \angle ZWY$,

$\angle WXY \cong \angle YZW$

Prove: $\triangle XYW \cong \triangle ZWY$

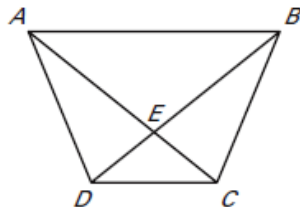


Statements	Reasons
1. $\angle XYW \cong \angle ZWY$	1.
2. $\angle WXY \cong \angle YZW$	2.
3.	3.
4.	4.

15. Complete the proof.

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

Prove: $\triangle AED \cong \triangle BEC$

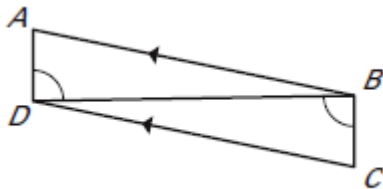


Statements	Reasons
1. $\overline{DE} \cong \overline{CE}$	1.
2. $\angle ADE \cong \angle BCE$	2.
3. $\angle AED \cong \angle BEC$	3.
4.	4.

16. Write a proof.

Given: $\overline{AB} \parallel \overline{CD}$, $\angle ADB \cong \angle CBD$

Prove: $\triangle ABD \cong \triangle CDB$

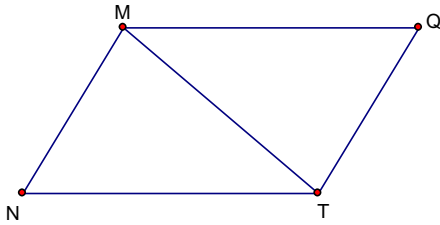


Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

17. Write a proof.

Given: $\overline{MQ} \parallel \overline{NT}$, $\angle N \cong \angle Q$

Prove: $\triangle TNM \cong \triangle MQT$



Statements	Reasons

Answer Key:

- $\overline{FE} \cong \overline{TR}$ OR $\overline{DE} \cong \overline{QR}$
- $\angle F \cong \angle T$
- $\overline{DF} \cong \overline{QT}$
- No
- $\angle KNL \cong \angle MLN$ by Alt. Int. \angle 's Theorem, $\overline{LN} \cong \overline{LN}$ by Reflexive, $\triangle KLN \cong \triangle MNL$ by ASA
- $\overline{TX} \cong \overline{VY}$ by summation of congruent parts, $\overline{YX} \cong \overline{YX}$ by Reflexive, $\overline{YZ} \cong \overline{YW}$ by summation of congruent parts, $\triangle TXZ \cong \triangle VYW$ by SAS
- No, $\angle M$ and $\angle Y$ are not corresponding angles
- No, \overline{JR} and \overline{YZ} are not corresponding sides
- Yes, AAS
- No, the congruent sides are not corresponding sides
- $\triangle HGL \cong \triangle JKM$, AAS
- $\triangle PQU \cong \triangle VPS$, AAS
- $\triangle ABC \cong \triangle DEF$, ASA
1. Given; 2. Given; 3. $\overline{WY} \cong \overline{WY}$; Reflexive; 4. $\triangle XYW \cong \triangle ZWY$; AAS
1. Given; 2. Given; 3. VAT; 4. $\triangle AED \cong \triangle BEC$; ASA
1. $\overline{AB} \parallel \overline{CD}$, Given; 2. $\angle ABD \cong \angle CDB$, Alt. Int. Angles Thm; 3. $\angle ADB \cong \angle CBD$, Given; 4. $\overline{BD} \cong \overline{BD}$, Reflexive; 5. $\triangle ABD \cong \triangle CDB$, ASA
1. $\overline{MQ} \parallel \overline{NT}$, Given; 2. $\angle QMT \cong \angle MTN$, Alt. Int Angles Thm; 3. $\angle N \cong \angle Q$, Given; 4. $\overline{MT} \cong \overline{MT}$, Reflexive; 5. $\triangle TNM \cong \triangle MQT$, AAS