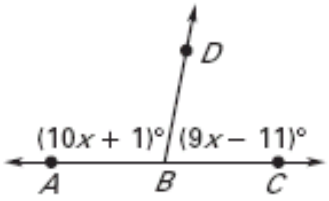
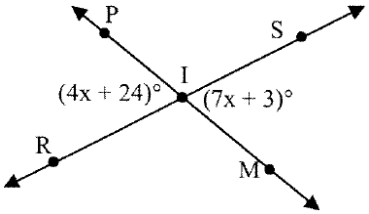
Geometry Unit 2A Review Triangles and Proofs Name: _____

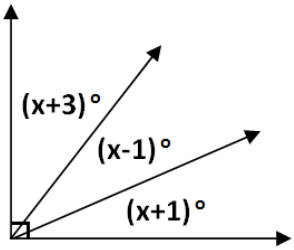
1. Solve for x.



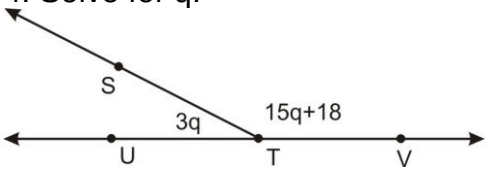
2. Solve for x.



3. Solve for x.



4. Solve for q.



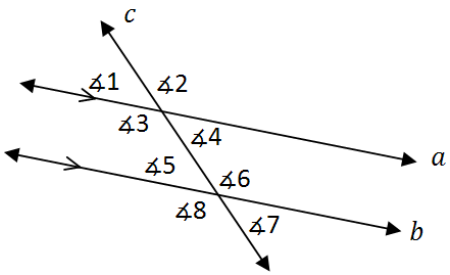
Name the angles listed and the special property.

5. ∠1 and ∠5_____

6. ∠4 and ∠6 _____

7. ∠2 and ∠8_____

8. ∠4 and ∠5_____



9. Given m||n and m∠8, find the measures of all the numbered angles in the figure.

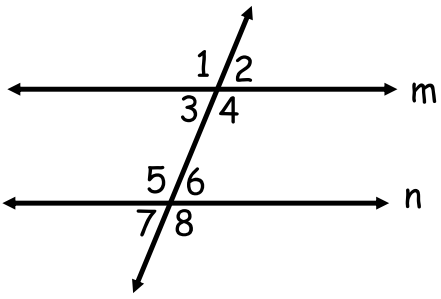
m∠8 = 112

m∠1 = _____ m∠2 = _____

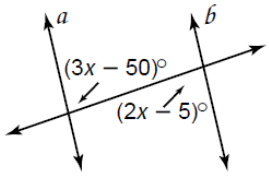
m∠3 = _____ m∠4 = _____

m∠5 = _____ m∠6 = _____

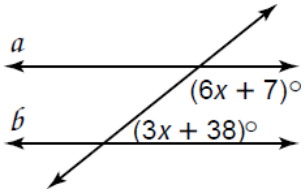
m∠7 = _____



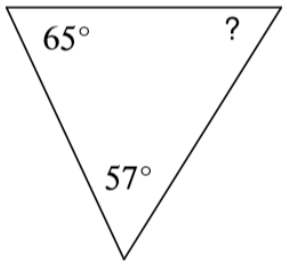
10. Solve for x.



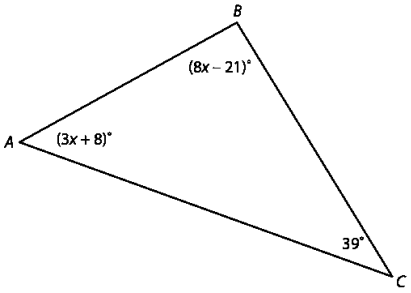
11. Solve for x.



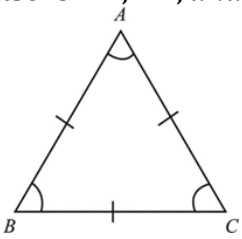
12. Find the missing angle (?).



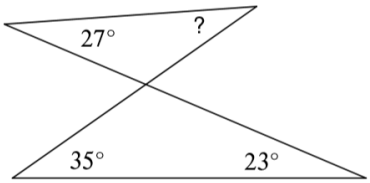
13. What is the measure of $\angle B$?



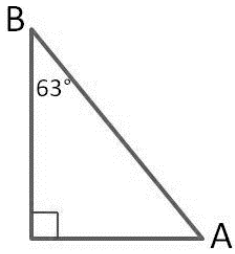
14. Find the measure $\angle A, \angle B, and\ \angle C$.



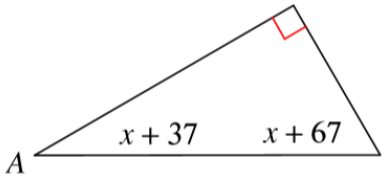
15. Find the missing angle (?).



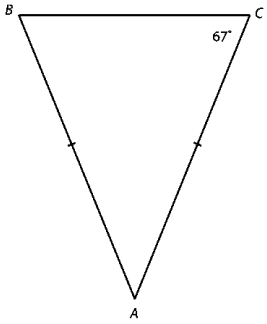
16. What is the measure of $\angle A$?



17. What is the measure of $\angle A$?

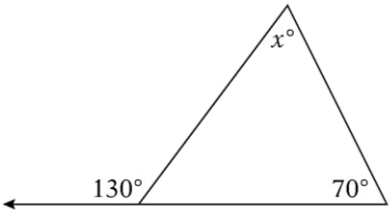


18. What is the measure of $\angle A\ and\ \angle B$?

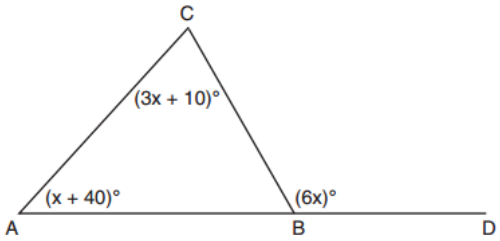


19. Find the missing angle.

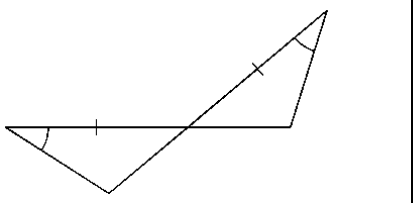
20. Find x.

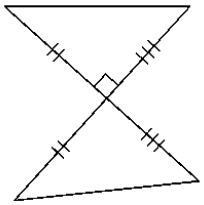
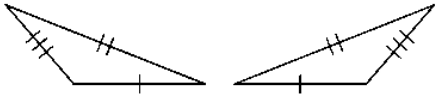
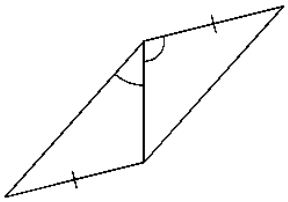
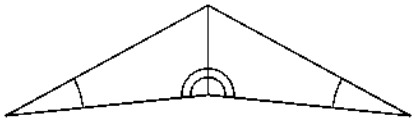


21. Solve for x.



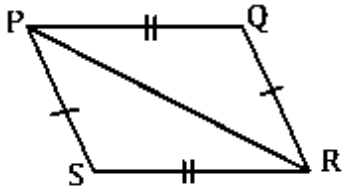
22. Use the given information below to determine which congruence statement can be used to show that the triangles are congruent. If it is not possible to prove the triangle congruence, explain why not.



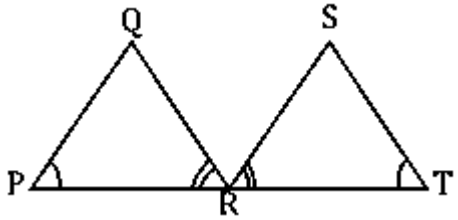
Complete the two column proofs below.

23. $\overline{PS} \cong \overline{QR}$, $\overline{PQ} \cong \overline{SR}$



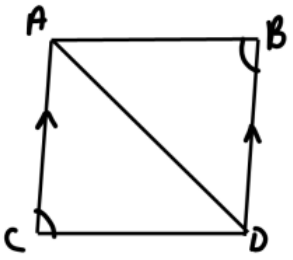
Statements	Reasons
$\overline{PS} \cong \overline{QR}$,	
$\overline{PQ} \cong \overline{SR}$	
$\overline{PR} \cong \overline{PR}$	
$\Delta PSR \cong \Delta RQP$	

24. $R\ is\ the\ midpoint\ of\ \overline{PT}$, $\angle PRQ \cong \angle TRS,\ and\ \angle P \cong \angle T$.



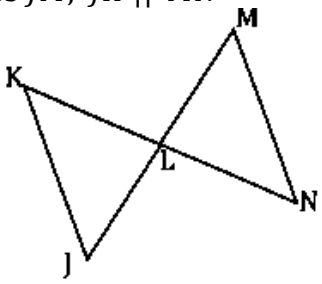
Statements	Reasons
$\angle PRQ \cong \angle TRS$	
$\angle P \cong \angle T$	
$R\ is\ the\ midpoint\ of\ \overline{PT}$,	
$\overline{PR} \cong \overline{RT}$	
$\Delta PRQ \cong \Delta TRS$	

25. $\overline{AC}\ ||\ \overline{BD}, \angle C \cong \angle B$



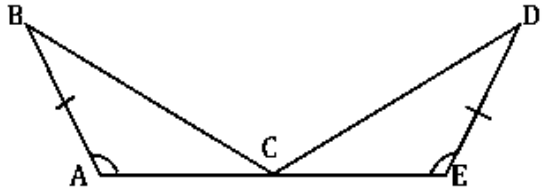
Statements	Reasons
$\overline{AC}\ ||\ \overline{BD}$	
$\angle C \cong \angle B$	
$\angle BDA \cong \angle CAD$	
$\overline{AD} \cong \overline{AD}$	
$\Delta BDA \cong \Delta CAD$	

26. $\overline{KN}\ Bisects\ \overline{JM},\ \overline{JK}\ ||\ \overline{MN}$



Statements	Reasons
$\overline{KN}\ Bisects\ \overline{JM}$	
$\overline{JL} \cong \overline{LM}$	
$\overline{JK}\ ||\ \overline{MN}$	
$\angle JKL \cong \angle MNL$	
$\angle KLJ \cong \angle NLM$	
$\Delta KLJ \cong \Delta NLM$	

C *is the midpoint of* $\overline{AE}$, $\overline{BA} \cong \overline{DE}, \angle A \cong \angle E$.



Statements	Reasons
$\overline{BA} \cong \overline{DE}$	
$\angle A \cong \angle E$	
C *is the midpoint of* $\overline{AE}$	
$\overline{AC} \cong \overline{CE}$	
$\Delta ABC \cong \Delta EDC$	

$\angle 1$ and $\angle 2$ are complementary. Solve for x and the measure of both angles.

$\angle 1 = 12x + 4$
$\angle 2 = 9x + 2$

One of two supplementary angles is 123° less than twice its supplement. Find the measure of both angles.

19. ΔABC and ΔDEF: $\angle A \cong \angle D, \angle C \cong \angle F, and\ \overline{AC} \cong \overline{DF}$.

20. ΔJKL and ΔNOP: $\angle K \cong \angle O, \angle L \cong \angle P, and\ \overline{JL} \cong \overline{NP}$.