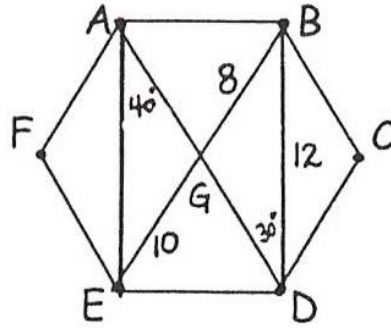


Unit 4b Review Homework

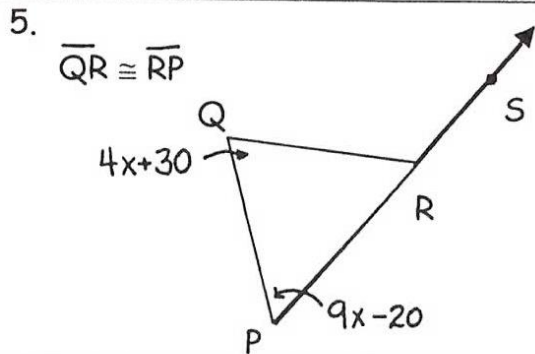
$\triangle AGE \cong \triangle BGD$

1. $\angle AEG \cong$ _____ 2. $AG =$ _____

3. $m\angle AGB =$ _____ 4. $\triangle EAG \cong \triangle$ _____



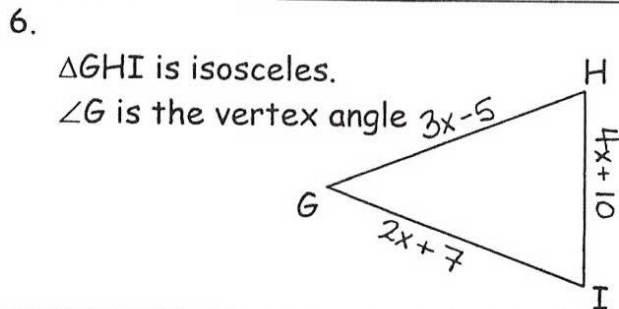
Use the information in the diagram to write an equation. Find the value of x , then find the indicated part of the triangle.



5. Equation: _____

$x =$ _____

Find $m\angle QRS$ _____

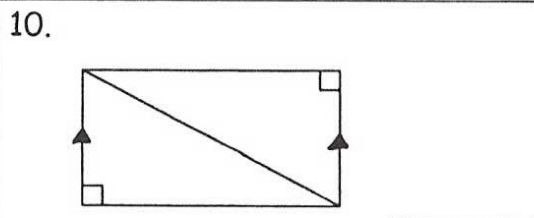
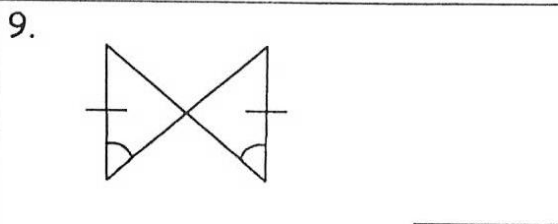
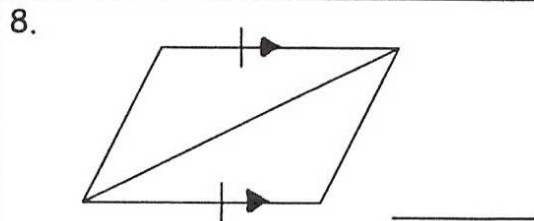
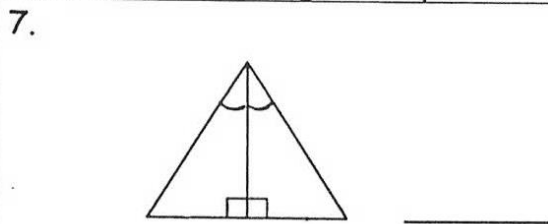


6. Equation: _____

$x =$ _____

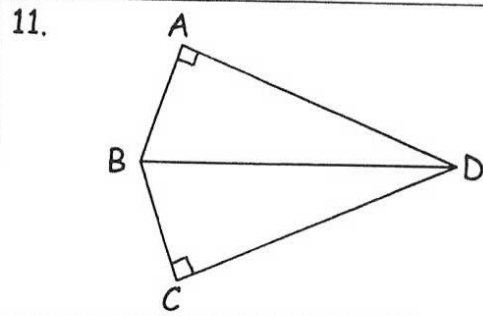
Find HI _____

State which congruence method(s) can be used to prove the $\triangle s \cong$. Mark off any additional $\angle s$ or segments you know are \cong . If $\triangle s$ NOT \cong , write NC.

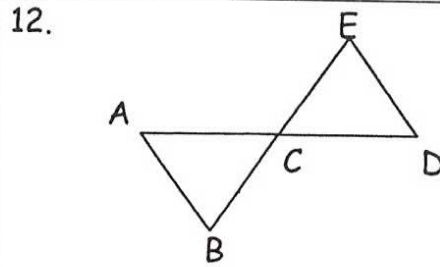


Mark off the given and additional \angle s and segments that are congruent. State the $\Delta \cong$ to the given triangle and state the congruence.

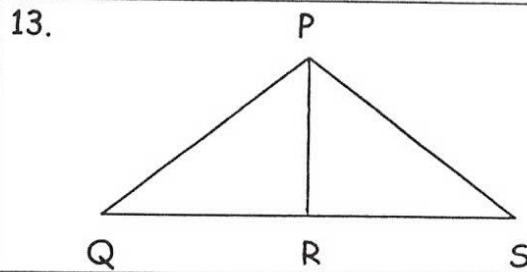
11. \overline{BD} bisects $\angle ABC$
 $\Delta ABD \cong \Delta$ _____ by _____



12. \overline{BE} bisects \overline{AD}
 $\overline{BC} \cong \overline{CE}$
 $\Delta ABC \cong \Delta$ _____ by _____

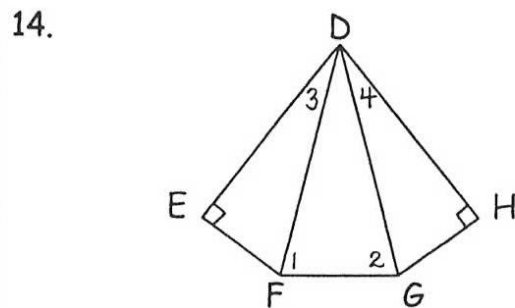


13. R is the midpoint of \overline{QS}
 $\overline{PQ} \cong \overline{PS}$
 $\Delta PQR \cong \Delta$ _____ by _____



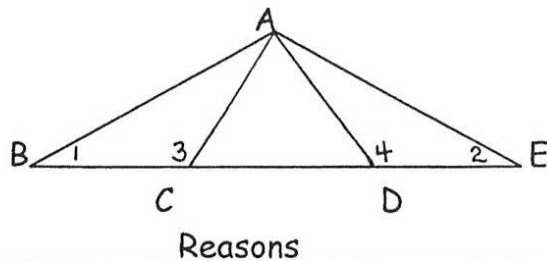
What additional information is needed to prove the Δ s \cong by the stated congruence?

14. HL Given: $\overline{EF} \cong \overline{GH}$ _____
 SAS Given: $\overline{ED} \cong \overline{DH}$ _____
 AAS Given: $\angle 1 \cong \angle 2$ _____



Write a two-column proof.

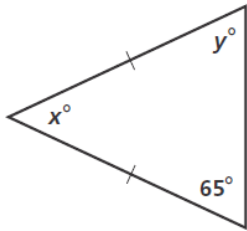
15. Given: $\angle 1 \cong \angle 2$
 $\angle 3 \cong \angle 4$
 Prove: $\overline{BC} \cong \overline{ED}$



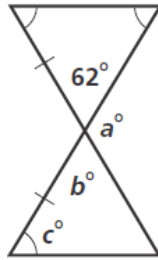
Statements	Reasons

Determine the value of the variables. Also provide the requested information.

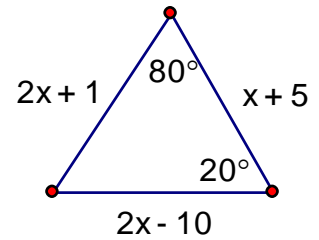
20. type of triangle shown



21. relationship between the triangles



22. type of triangle shown



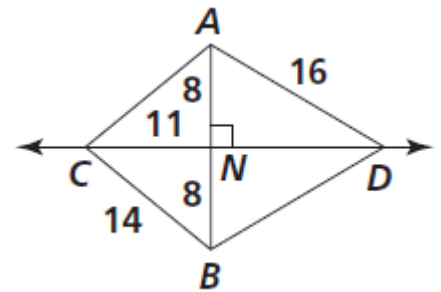
23. $\triangle LMN \cong \triangle XYZ$, $m\angle L = x^2 + 50$, $m\angle N = 40$, $m\angle Y = -2x + 10$. Find $m\angle X$.

Use the diagram shown for #24 - 26

24. Find BD.

25. Complete the statement: C is equidistant from ___ and ___.

26. Can you conclude $CN = DN$? Explain.



\overline{CD} is the perpendicular bisector of both \overline{XY} and \overline{ST} , and $CY = 16$. Find each length.

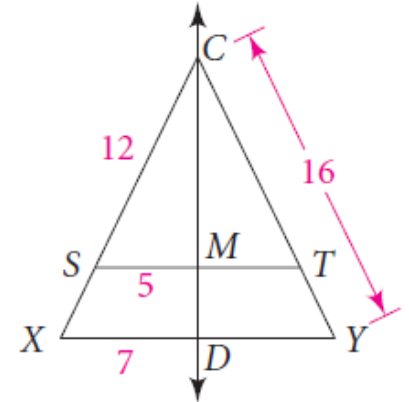
27. CT

28. TY

29. MT

29. SX

31. If $CX = 3x - 5$, find x.



32. Given: $\overline{BD} \perp \overline{AC}$
 \overline{BD} bisects $\angle B$.
 Prove: $\angle 2 \cong \angle 5$

