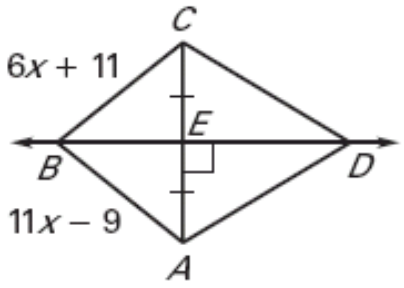
Geometry Name _____
Chapter 5 Review

1. A point on the ⊥ bisector is equidistant from the _____ of the bisected _____.

2. a. Solve for x. Then determine BC and BA.



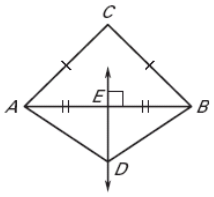
x = _____

BC = _____

BA = _____

2b. Is point B on the perpendicular bisector? Explain.

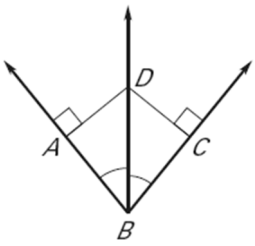
3. Tell whether the information in the diagram allows you to conclude that *C* is on the perpendicular bisector of $\overline{AB}$. Explain.



4. A point on the angle bisector is equidistant from the _____ of the bisected _____.

For questions 5 and 6 determine if. $DA = DC$. Explain your reasoning.

5.



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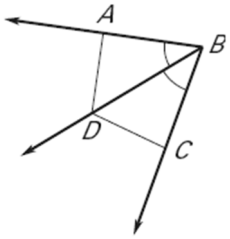
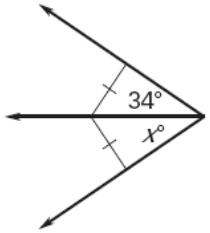


For questions 7-12 decide if it is possible to determine x. If it is possible, explain your reasoning and determine the value of x. If it is not possible, explain your reasoning.

7.



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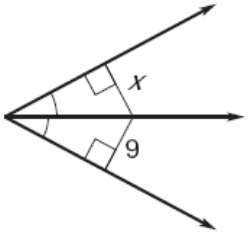

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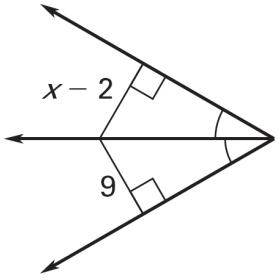

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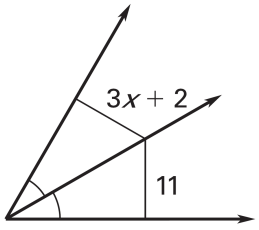

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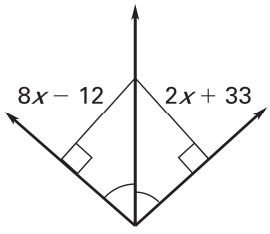

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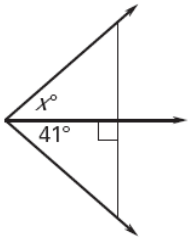
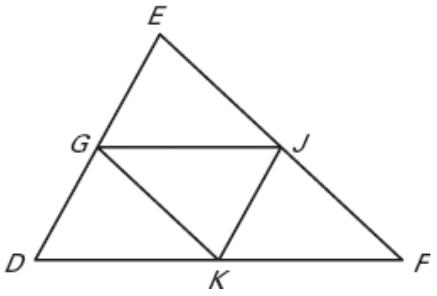


13. In ΔDEF below, points G, J, and K are midpoints.



a. $\overline{GJ} \parallel$ _____

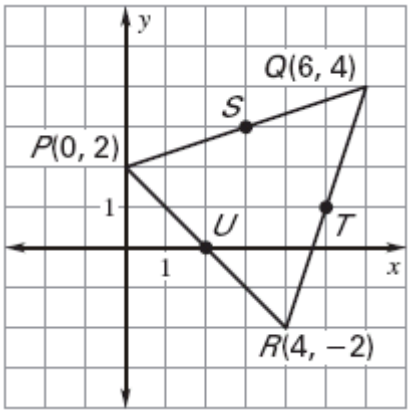
b. $\overline{EJ} \cong$ _____ $\cong$ _____

c. $\overline{DE} \parallel$ _____

d. $\overline{GJ} \cong$ _____ $\cong$ _____

e. If $GK = 4x - 1$ and $EF = 5x + 4$, determine:
$x =$ _____ $GK =$ _____ $EJ =$ _____ $EF =$ _____

14. Use the graph shown at the right.

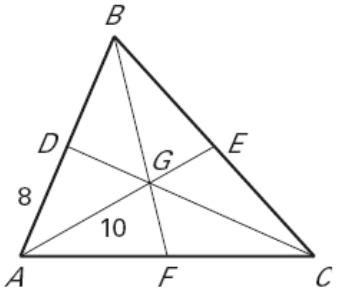


a. Prove that $\overline{ST}$ is parallel to $\overline{PR}$.
Slope of $\overline{ST}$: Slope of $\overline{PR}$:

b. Prove that the length of $\overline{PR}$ is twice the length of $\overline{ST}$.
Length of $\overline{PR}$: Length of $\overline{ST}$:

c. Now that you have proven $\overline{ST} \parallel \overline{PR}$ and $PR = 2 \cdot ST$, what type of segment is ST? What kind of points are points S and T for the triangle?

15. Point G is the point of intersection of the three medians of ΔABC. You are given $AD = 8, AG = 10$, and $CD = 18$. Find the length of each segment.



a. $BD =$ _____

b. $AB =$ _____

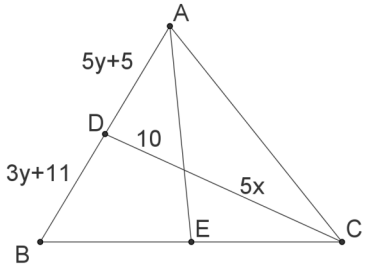
c. $EG =$ _____

d. $AE =$ _____

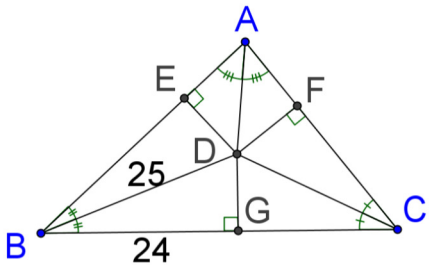
e. $CG =$ _____

f. $DG =$ _____

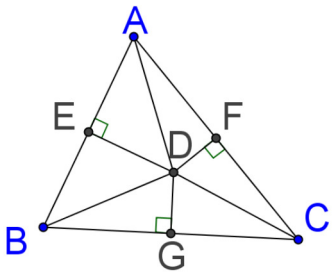
21. $\overline{AE}$ and $\overline{CD}$ are medians of ΔABC. Find the value of x and y.



22. The angle bisectors of ΔABC intersect at point D. If $BD = 25$ and $BG = 24$, find FD.



23. The perpendicular bisectors of ΔABC meet at point D. If $BD = 7, ED = 5$, and $FC = 6$, find DC.

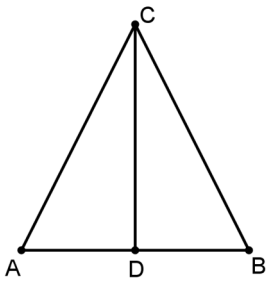


24. Given that $\overline{CD}$ is the perpendicular bisector of $\overline{AB}$ with $AB = 16$ and $CD = 15$ determine the following measures.

$m\angle ADC =$ _____

$AD =$ _____

$AC =$ _____



25. In the picture you are given that $\overline{AD} \cong \overline{BD}$ and $\angle ACE \cong \angle BCE$. Identify an example of each.

An example of a perpendicular bisector is

An example of an angle bisector is

An example of a median is

An example of an altitude is