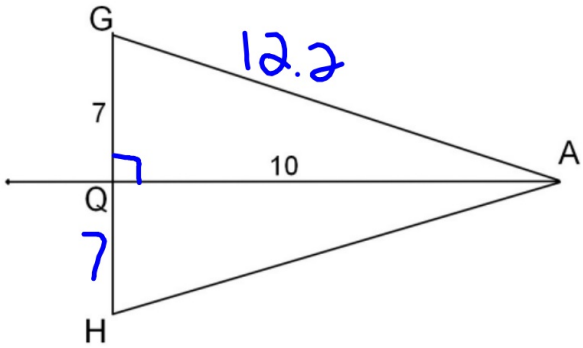
1. Given $\overrightarrow{AQ}$ is the $\perp$ bisector of $\overline{GH}$ find the following.

a. GH 14 b. AG 12.2 c. AH 12.2

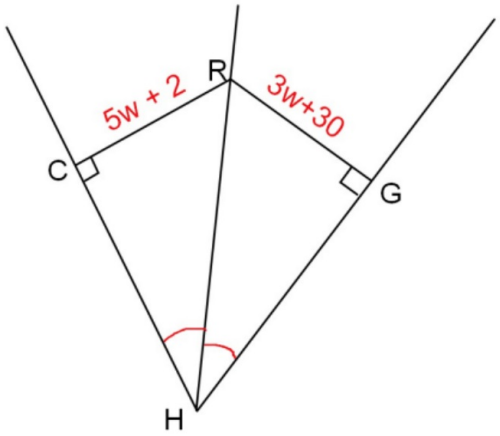


2. Find the value of w.

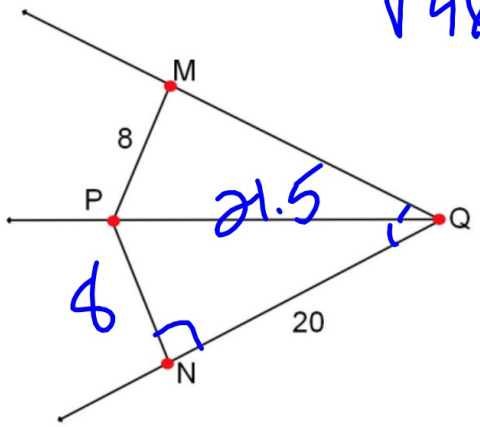
$RC = RG$

$5w + 2 = 3w + 30$

$w = 14$



3. $\overrightarrow{QP}$ bisects $\angle MQN$. Find the length of $\overline{PQ}$



$\sqrt{464} = c$

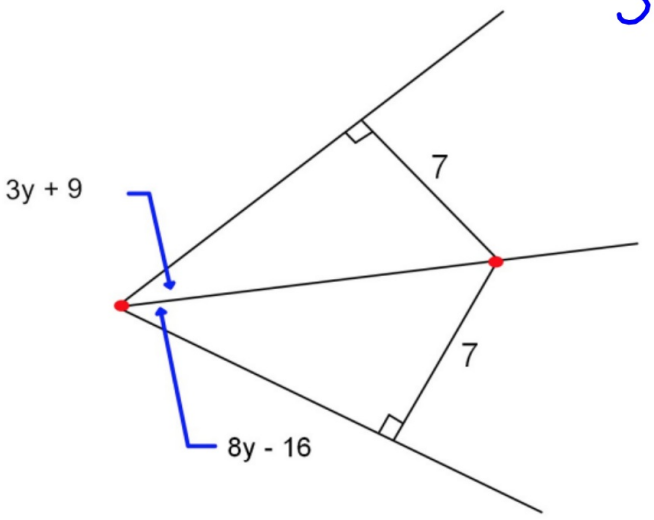
21.5

c

8

$?$

4. Find the value of y.



$3y+9 = 8y-16$

$5y = 25$

$y = 5$

HW #27 Answers:

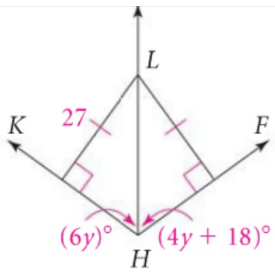
2. 15 3. 18 4. 8

10.9

6. x = 12; JK = 17; JM = 17

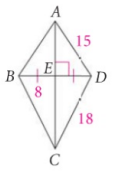
18. 12 19. 4 20. 4

21. 16 22. 5



10. Find the value of y.

Use the figure at the right for Exercises 1–4.

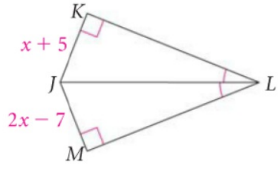


1. From the information given in the figure, how is $\overline{AC}$ related to $\overline{BD}$?

2. Find AB. **3.** Find BC. **4.** Find ED.

5. On a piece of paper, mark a point H for home and a point S for school. Describe the set of points equidistant from H and S

6. Algebra Find x, JK, and JM.



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

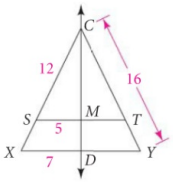
18. CT **19.** TY

20. SX **21.** CX

22. MT **23.** ST

24. DY **25.** XY

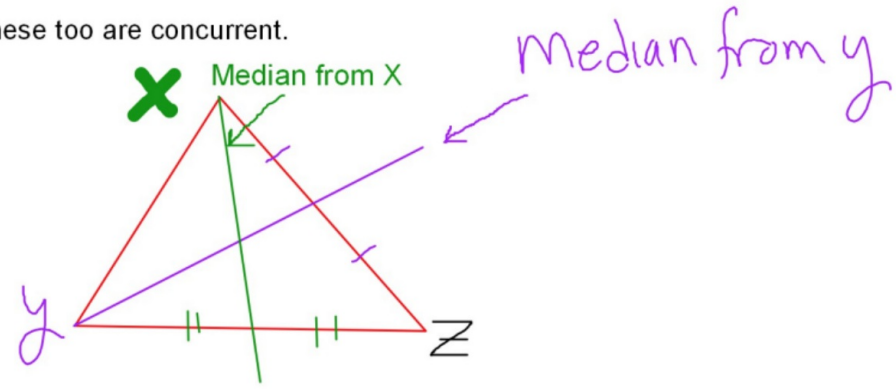
26. What kind of triangles are $\triangle SCT$ and $\triangle XCY$? Explain.



Median of a triangle:

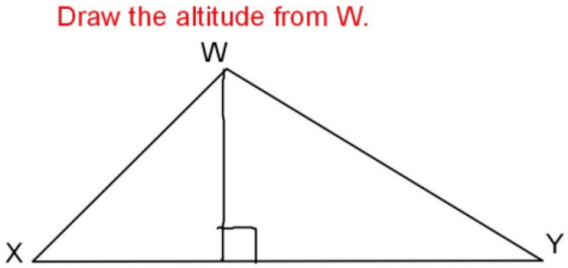
The segment that conects a vertex with the midpoint of the opposite side.

These too are concurrent.



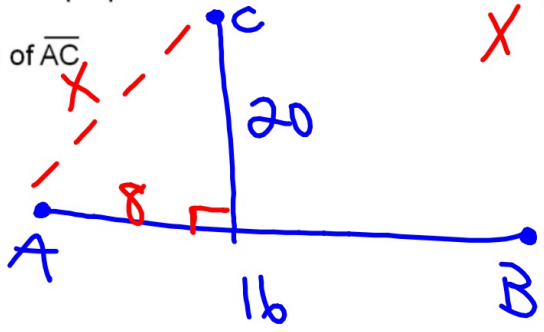
Altitude of a triangle: (height)

The perpendicular segment from a vertex to a line containing the opposite side.



Segment $\overline{AB}$ is 16 units long. Point C is placed 20 units from $\overline{AB}$ and on the perpendicular bisector of $\overline{AB}$.

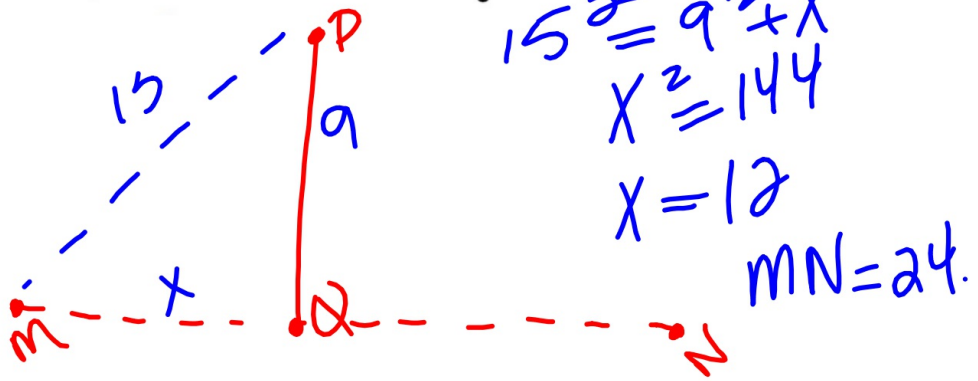
Find the length of $\overline{AC}$



$X^2 = 8^2 + 20^2$

$X = 21.5$

$\overline{PQ}$ is the perpendicular bisector of $\overline{MN}$. Q is the point of intersection of $\overline{PQ}$ and $\overline{MN}$. If PQ = 9 and PM = 15 find the length of MN



$15^2 = 9^2 + X^2$

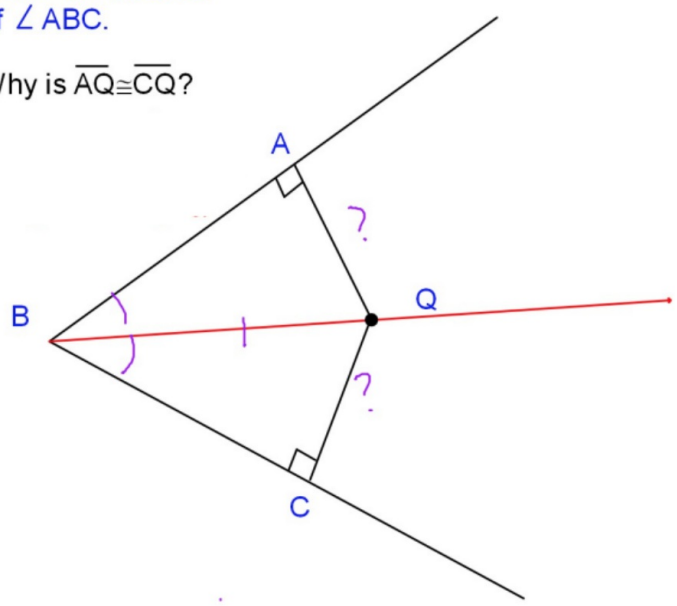
$X^2 = 144$

$X = 12$

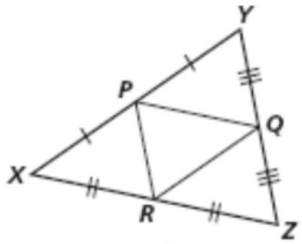
$MN = 24.$

$\overrightarrow{BQ}$ is the bisector of $\angle ABC$.

Why is $\overline{AQ} \cong \overline{CQ}$?



1. Use the triangle to identify three pairs of parallel sides.



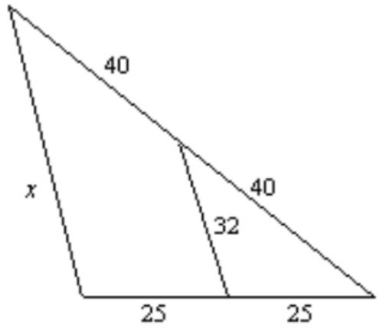
(1) PQ ∥ XZ

(2) PR ∥ YZ

(3) QR ∥ YX

2. Find the value of x.

x = 64



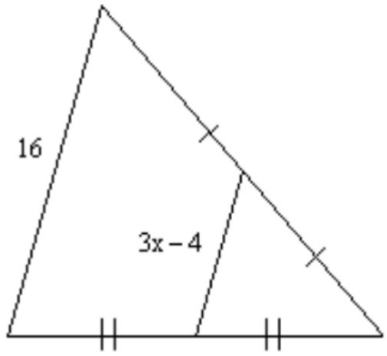
3. Find the value of x.

x = 4

$8 = 3x - 4$

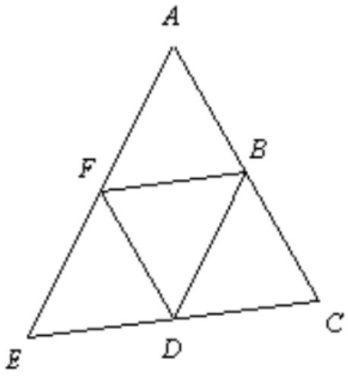
$12 = 3x$

$x = 4$



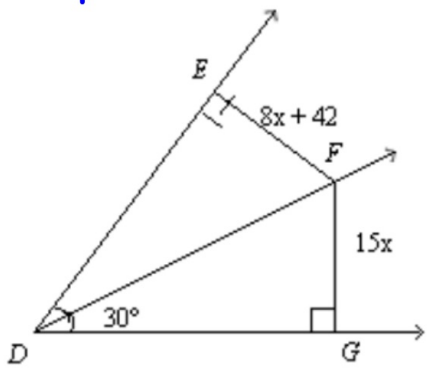
4. Points B, D, and F are midpoints of the sides of ΔACE. EC = 30 and DF = 23. Find AC.

AC = 46



5. $\overrightarrow{DF}$ bisects $\angle EDG$. Find the value of x.

x = 6

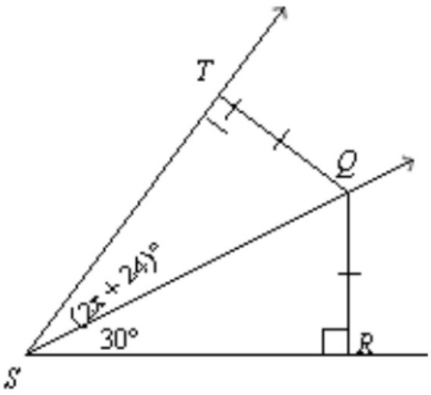


6. Q is equidistant from the sides of $\angle TSR$. Find the value of x.

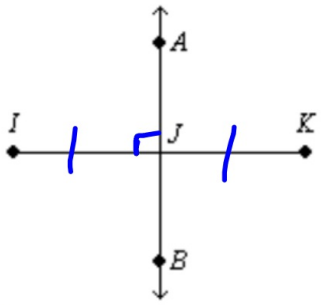
x = 3

$2x+24=30$

$x=3$



7. Which statement can you conclude is true from the diagram if $\overleftrightarrow{AB}$ is the perpendicular bisector of $\overline{IK}$? (Circle one.)



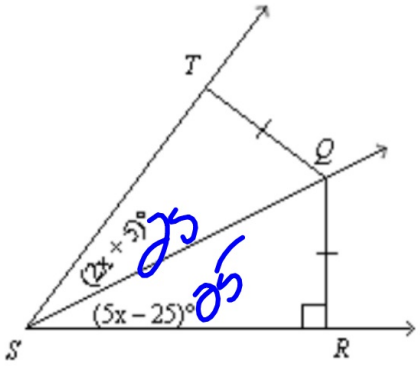
A. AJ = BJ

B. IJ = JK

C. $\angle IAJ$ is a right angle

D. A is the midpoint of $\overline{IK}$.

8. Q is equidistant from the sides of $\angle TSR$. Find m $\angle RST$. (Circle one.)



$2x + 5 = 5x - 25$

$x = 10$

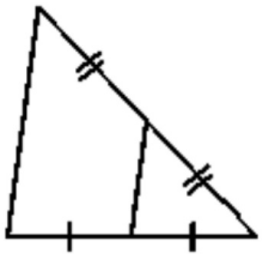
50

A. 25 B. 10

A. 25 B. 10

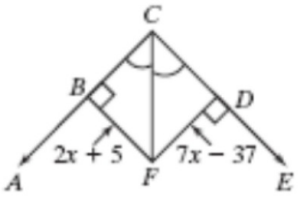
C. 2 D. 3

9. What is the name of the segment inside the large triangle below?



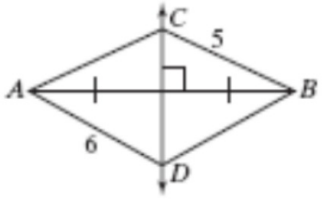
A. perpendicular bisector
B. angle bisector
C. midsegment
D. parallel line

10. What is the name of $\overline{CF}$ in the figure below?



A. perpendicular bisector
B. angle bisector
C. midsegment
D. parallel line

11. What is the name of $\overleftrightarrow{CD}$ in the figure below?



A. perpendicular bisector
B. angle bisector
C. midsegment
D. parallel line

CW/HW: Practice 5.2 Worksheet

IXL #16 - M.2 & M.3 due Friday at 4pm!