

Quiz Review

5 - 1 and 5 - 2

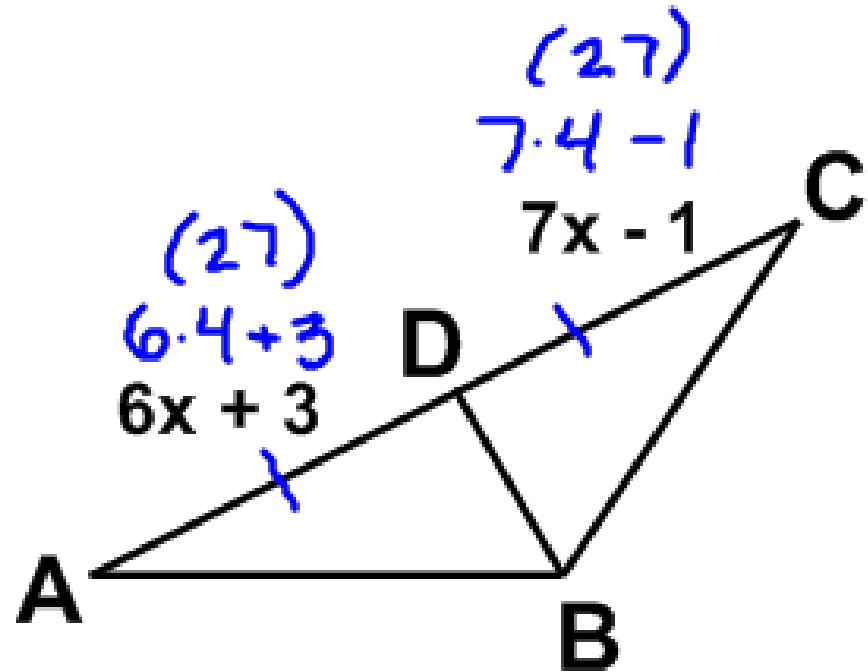
1. Find x and AC if \overline{BD} is a median.
(midpoint)

$$\begin{array}{r} 6x + 3 = 7x - 1 \\ -6x \quad -6x \end{array}$$

$$\begin{array}{r} 3 = x - 1 \\ +1 \quad -1 \end{array}$$

$$4 = x$$

$$AC = 54$$



2. Find x if \overline{ST} is an angle bisector, $m\angle QST = 4x + 2$, and $m\angle QSR = 10x - 6$.

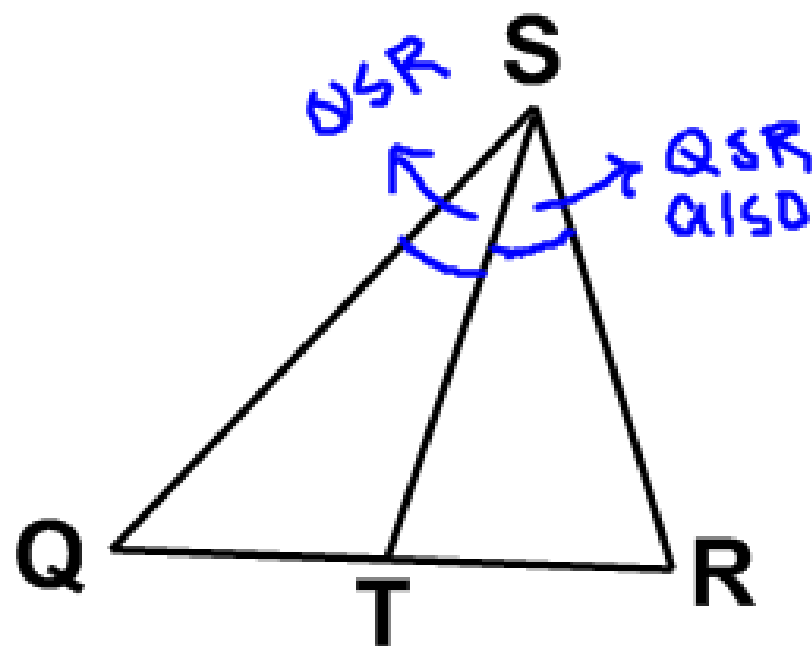
$$QSR + QSR = QST$$

$$\underline{4x+2} + \underline{4x+2} = 10x-6$$

$$\begin{array}{r} 8x + 4 = 10x - 6 \\ -8x \quad -8x \\ \hline 4 = 2x - 6 \end{array}$$

$$\begin{array}{r} 4 = 2x - 6 \\ +6 \quad +6 \\ \hline 10 = 2x \end{array}$$

$$\begin{array}{r} 10 = 2x \\ \hline x = 5 \end{array}$$



3. Find x and IJ if \overline{HK} is an altitude of $\triangle HIJ$.

(90°)

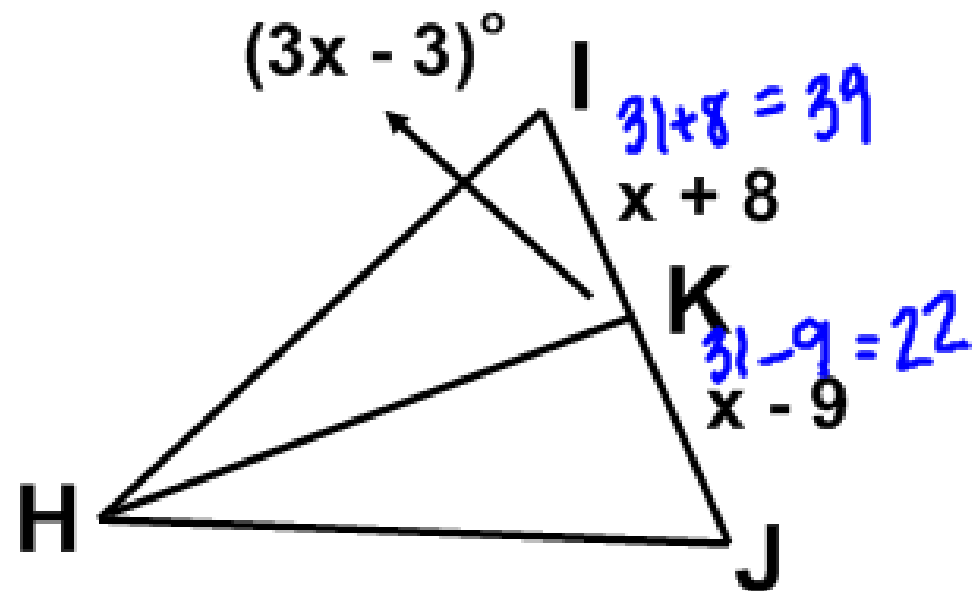
$$3x - 3 = 90$$

$+3 \quad +3$

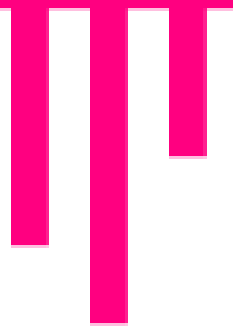
$$\frac{3x}{3} = \frac{93}{3}$$

$$x = 31$$

$$IJ = 61$$



4. Points R, S, and T are the midpoints of \overline{AB} , \overline{BC} , and \overline{AC} , respectively. Find x , y , and z .

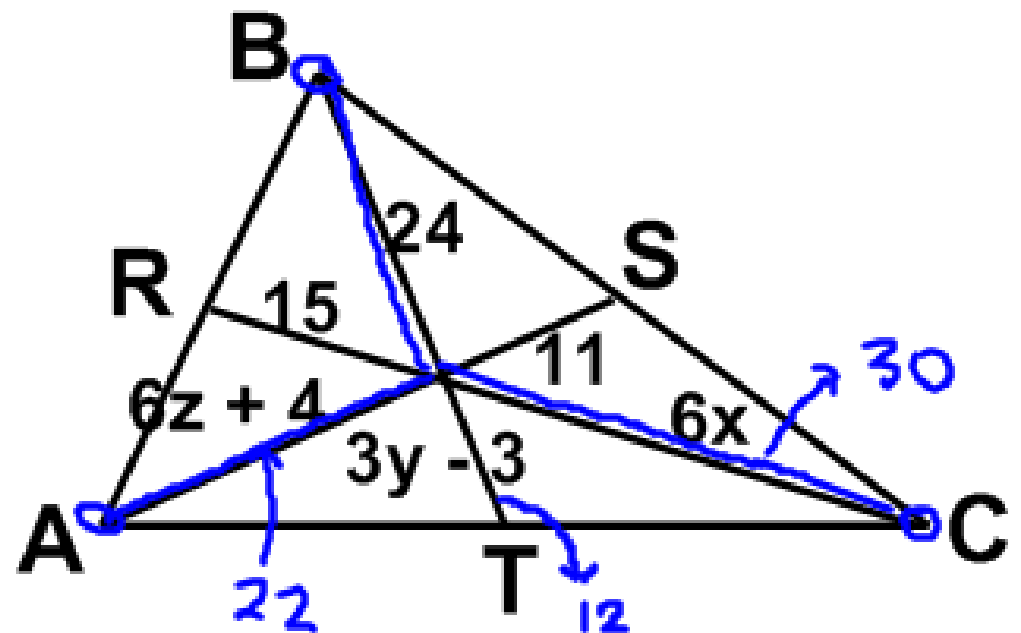


$$3y - 3 = 12$$

$$6z + 4 = 22$$

$$6x = 30$$

$$\begin{aligned} x &= 5 \\ y &= 5 \\ z &= 3 \end{aligned}$$

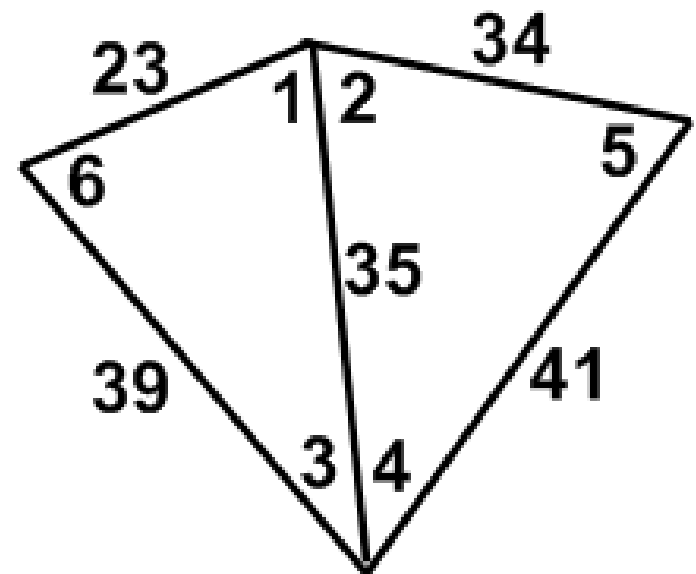


Determine the relationship between the measures of the following angles.

$$5. \ m\angle 1 \overset{(39)}{>} \overset{(35)}{m\angle 6}$$

$$6. \ m\angle 3 \overset{(23)}{<} \overset{(35)}{m\angle 6}$$

$$7. \ m\angle 5 \overset{(35)}{>} \overset{(34)}{m\angle 4}$$



Determine the relationship between the measures of the given sides.

$$8. \overline{DH} > \overline{GH}$$

$$9. \overline{DE} < \overline{DG}$$

$$10. \overline{EF} < \overline{FG}$$

