

# 7.3 WS A/B Key

Smallest

①  $\cancel{F}$ ,  $\cancel{D}$ ,  $\cancel{E}$

Smallest

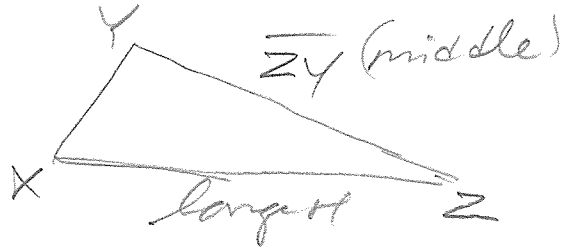
②  $\overline{IH} < \overline{GH} < \overline{GI}$

$$\begin{array}{r} 59 \\ \underline{61} \\ 120 \end{array} \quad m\angle I = 60$$

③  $\overline{XZ} > \overline{ZY} > \overline{YX}$

largest

$\cancel{Y}$ ,  $\cancel{X}$ ,  $\cancel{Z}$



④  $8 + 15 > 6 \checkmark$

$15 + 6 > 8 \checkmark$

$8 + 6 \not> 15 \times$

NO. The 2 sides of 8 & 6 are not long enough to meet.



$b + s > s$

$s + s > b$

$b > 0$

$2s > b$

↑  
b is less than  $2s$ .

Range of  $b$ :

$$0 < b < 2s$$

Base must be greater than 0 and less than 2 times legs.

If  $b > 2s$ , will not form  $\Delta$ .

Range of  $A$ :

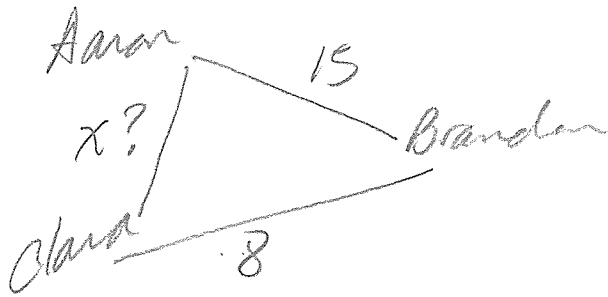
$\frac{180 - A}{2} = \text{each base } \cancel{\times}$

$0 < A < 180^\circ$

or

$0 < A < 180 - A$

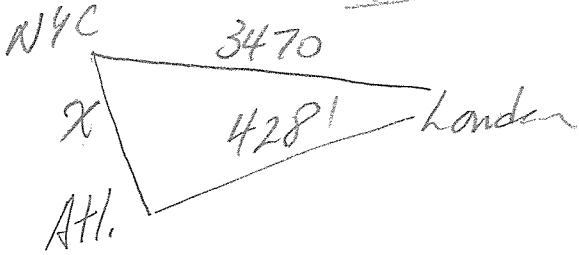
⑥



$$\begin{array}{r}
 15 + 8 > x \\
 23 > x \\
 \hline
 15 + x > 8 \\
 x > -7 \\
 \hline
 \end{array}
 \qquad
 \begin{array}{r}
 8 + x > 15 \\
 x > 7
 \end{array}$$

range:  $7 < x < 23$

⑦



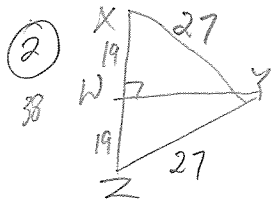
$$\begin{array}{r}
 3470 + 4281 > x \\
 7751 > x \\
 \hline
 4281 + x > 3470 \\
 x > -811 \\
 \hline
 3470 + x > 4281 \\
 x > 811
 \end{array}$$

$$\begin{array}{r}
 811 < x < 7751 \\
 7751 \\
 \hline
 7751
 \end{array}$$

$8562 < x < 15502$

# 8-1 WSA/B

①  $ZY = 15.5$



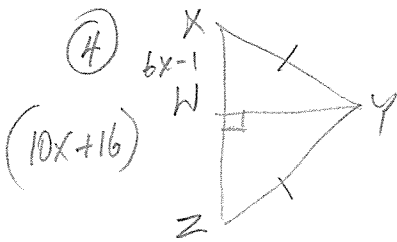
Since  $\overline{XY} \cong \overline{YZ}$  &  $\overline{WY} \perp \overline{XZ} \rightarrow$  conclude that  $\overline{WY}$  is  $\perp$  bisector.

So,  $ZW = 19$ .

③  $KY = YZ$

$4n = 14$

$n = \frac{7}{2}$



Conclude:  $\overline{WY}$  is  $\perp$  bisector

$2(6x-1) = 10x+16$

$12x-2 = 10x+16$

$2x = 18$

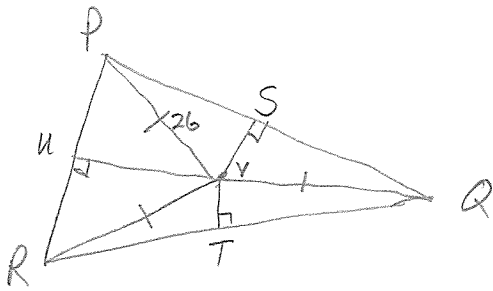
$x = 9$

$ZW = 6(9) - 1$

$= 53$

⑤

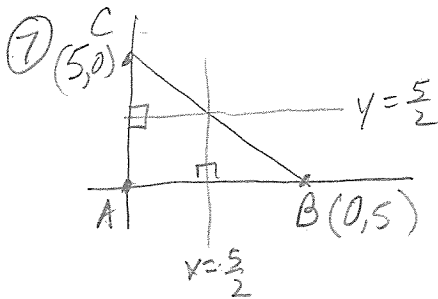
⑥



$RV = 26$

$TR = 24$

circumcenter  
 $(2\frac{1}{2}, 2\frac{1}{2})$



8.  $(0, 3.25)$

⑩  $(4, 6)$

⑪  $\frac{4}{3}$

⑫  $-\frac{3}{4}$

⑬  $y = -\frac{3}{4}x + 9$

⑮ Circumcenter  $\rightarrow$  Finding circumcenter:  $(5, \frac{21}{4})$

$$y = -\frac{3}{4}x + 9$$

$$x = 5$$

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$$y = -\frac{3}{4}(5) + 9$$

$$= -\frac{15}{4} + \frac{9}{1}$$

$$= -\frac{15}{4} + \frac{36}{4}$$

$$= \frac{21}{4}$$