

$$\frac{9-x}{x} = \frac{10}{5}$$

$$5(9-x) = 10x$$

$$45 - 5x = 10x$$

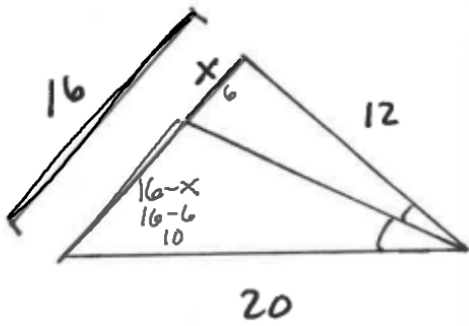
$$45 = 15x$$

$$x = 3$$

$$\text{red} + \text{blue} = 9$$

$$\text{red} + x = 9$$

$$\text{red} = 9 - x$$



$$\frac{16-x}{x} = \frac{20}{12}$$

$$12(16-x) = 20x$$

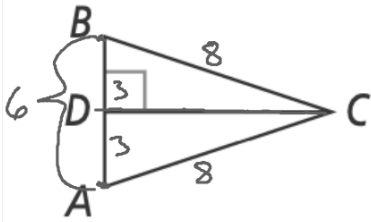
$$192 - 12x = 20x$$

$$\frac{192}{32} = \frac{32x}{32}$$

$$x = 6$$

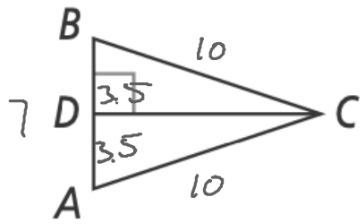
$$\frac{x}{16-x} = \frac{12}{20}$$

$$20x = 12(16-x)$$

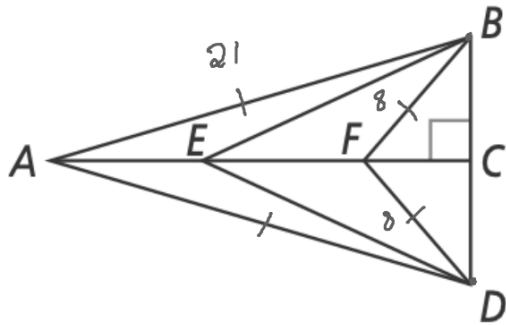


$$\begin{aligned} P &= AB + BC + AC \\ &= 8 + 8 + 6 \\ &= 22 \end{aligned}$$

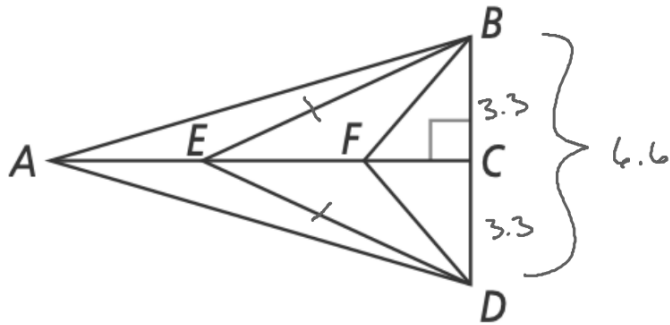
14. If $AD = 3$, $AC = 8$, and $BD = 3$, what is the perimeter of $\triangle ABC$?



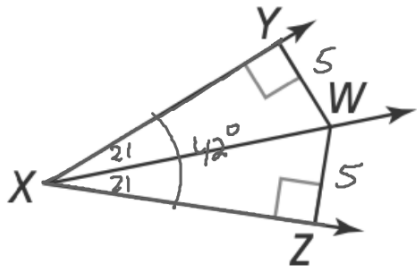
15. If $BC = 10$, $AB = 7$, and the perimeter of $\triangle ABC$ is 27, what is the value of BD ?



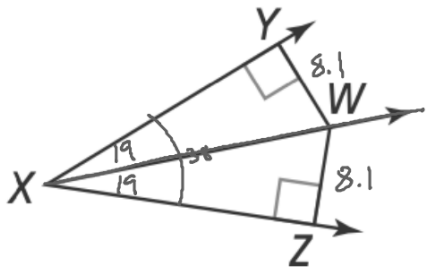
16. If $AD = 21$, $BF = 8$, and $DF = 8$, what is the value of AB ?



17. If $EB = 6.2$, $CD = 3.3$, and $ED = 6.2$, what is the value of BD ?



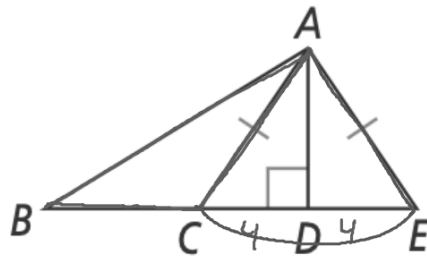
18. If $m\angle YXW = 21$, $YW = 5$, and $WZ = 5$, what is $m\angle ZXY$?



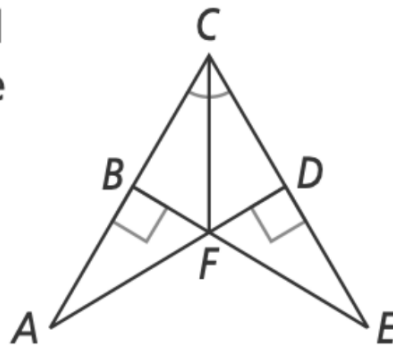
19. If $m\angle YXZ = 38$, $m\angle WXZ = 19$, and $WZ = 8.1$, what is the value of YW ?

20. If $CD = 4$ and the perimeter of $\triangle ABC$ is 23, what is the perimeter of $\triangle ABE$?

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21. Given that $\angle ACF \cong \angle ECF$ and $m\angle ABF = m\angle EDF = 90$, write a two-column proof to show that $\triangle ABF \cong \triangle EDF$.



Smallest
 \angle \angle
 ~~\cong \cong~~
 ~~\cong \cong~~

