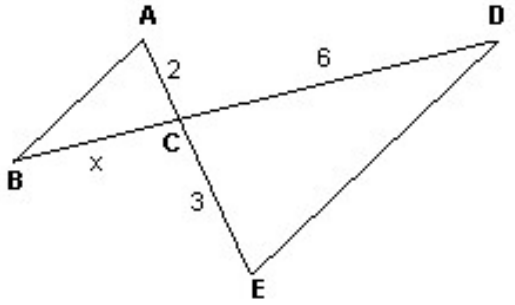
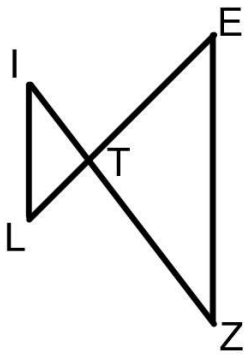
Name _____ Date _____
Mr. Schlansky Geometry

Bow Tie Problems

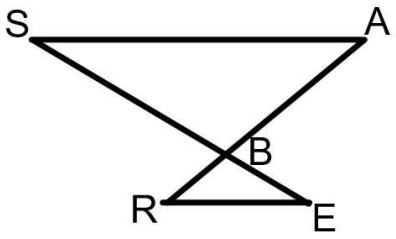
1. In the diagram below, $\overline{AB} \parallel \overline{DE}$. If $AC = 2$, $CD = 6$, and $CE = 3$, what is BC ?



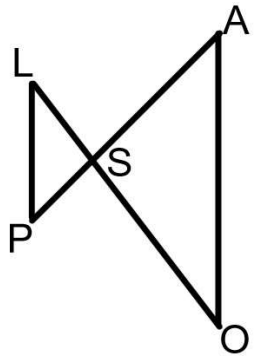
2. In the diagram below, $\overline{LI} \parallel \overline{ZE}$. If $LT = 12$, $TE = 18$, and $IT = 8$, find TZ.



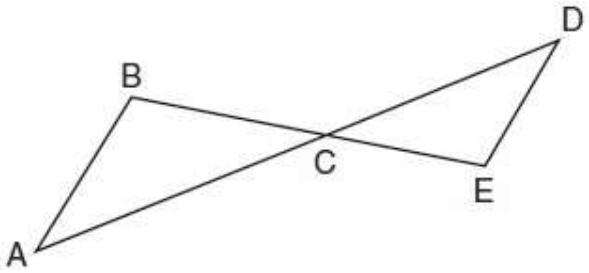
3. In the diagram below, $\overline{SA} \parallel \overline{RE}$. If $SB = 20$, $BE = 4$, and $BA = 12$, find RB.



4. In the diagram below, $\overline{LP} \parallel \overline{AO}$. If $LS = 8$, $SO = 12$, $AO = 11$, and $PS = 6$, find SA.



5. In the diagram below, $\overline{AD}$ intersects $\overline{BE}$ at C, and $\overline{AB} \parallel \overline{DE}$. If $CD = 6.6$ cm, $DE = 3.4$ cm, $CE = 4.2$ cm, and $BC = 5.25$ cm, what is the length of $\overline{AC}$, to the *nearest hundredth of a centimeter*?



6. In the diagram below, $\overline{SO}$ intersects $\overline{YF}$ at T, and $\overline{SY} \parallel \overline{FO}$. If $\overline{ST} = 4.4$, $\overline{TO} = 10.7$, $\overline{TY} = 4.8$, and $\overline{SY} = 7.1$, what is the length of $\overline{TF}$, to the *nearest tenth*?