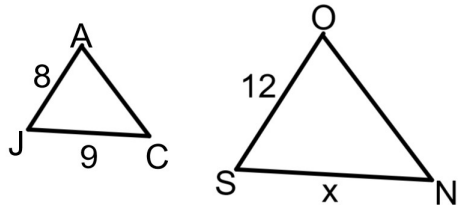
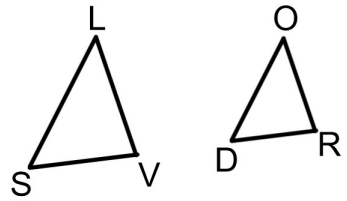
Name _____ Date _____
Mr. Schlansky Geometry

Finding Missing Sides of Similar Triangles

1. In the diagram, ΔJAC is similar to ΔSON. Find the measure of *SN*.

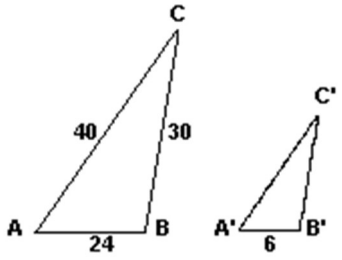


2. In the diagram, ΔSLV is similar to ΔDOR. If *SV=24*, *DR=16*, *LV=21,* find *OR*.

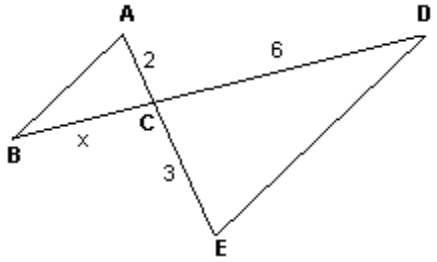


3. Triangle *HON* is similar to triangle *DUR*. If *HO=12, DU=24, UR=18*, find *ON*.

4. In the diagram, ΔABC is similar to $\Delta A'B'C'$, *AB* = 24, *BC* = 30, and *CA* = 40. If the shortest side of $\Delta A'B'C'$ is 6, find the length of the longest side of $\Delta A'B'C'$.

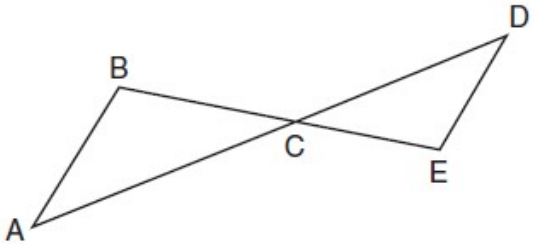


5. In the diagram below, $\overline{AB} \parallel \overline{DE}$. If $AC = 2$, $CD = 6$, and $CE = 3$, what is BC?

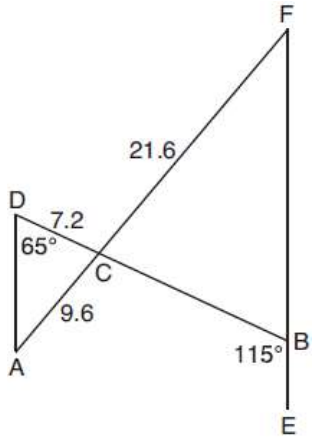


6. In the diagram below, $\overline{AD}$ intersects $\overline{BE}$ at C, and $\overline{AB} \parallel \overline{DE}$.

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*?



7. In the diagram below, $\overline{AF}$, and $\overline{DB}$ intersect at C, and $\overline{AD}$ and $\overline{FBE}$ are drawn such that $m\angle D = 65°$, $m\angle CBE = 115°$, $DC = 7.2$, $AC = 9.6$, and $FC = 21.6$. What is the length of $\overline{CB}$?



8. In the diagram below, $\overline{EF} \parallel \overline{HG}$, $EF = 5$, $HG = 12$, $FI = 1.4x + 3$, and $HI = 6.1x - 6.5$.

What is the length of $\overline{HI}$?