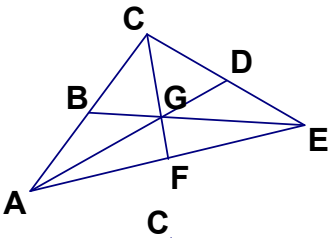
Name _____ Date _____

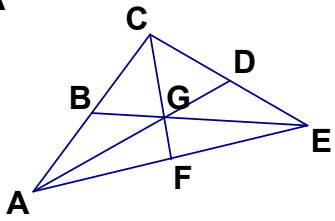
Mr. Schlansky Geometry

Intersecting Medians (Centroid Problems)

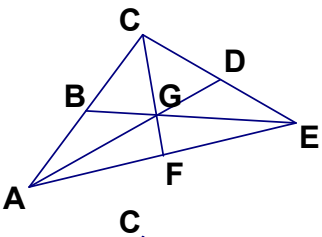
1. In the given triangle, all three medians are drawn in. If $\overline{AG} = 10$, find
   a) $\overline{GD}$
   b) $\overline{AD}$



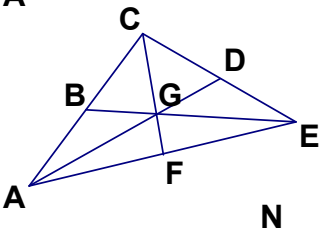
2. In the given triangle, all three medians are drawn in. If $\overline{FG} = 4$, find
   a) $\overline{CG}$
   b) $\overline{CF}$



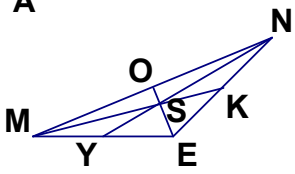
3. In the given triangle, all three medians are drawn in. If $\overline{AD} = 24$, find
   a) $\overline{AG}$
   b) $\overline{DG}$



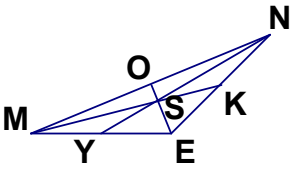
4. In the given triangle, all three medians are drawn in. If $\overline{AC} = 30$, find
   a) $\overline{AB}$
   b) $\overline{BC}$



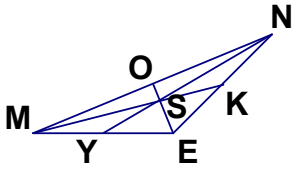
5. In the given triangle, all three medians are drawn in. If $\overline{MS} = 12$, find
   a) $\overline{SK}$
   b) $\overline{MK}$



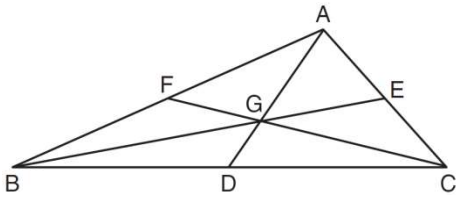
6. In the given triangle, all three medians are drawn in. If $\overline{OE} = 9$, find
   a) $\overline{OS}$
   b) $\overline{SE}$



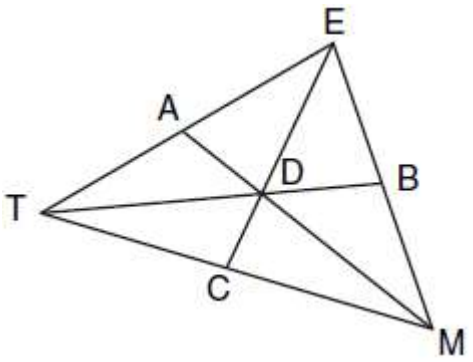
7. In the given triangle, all three medians are drawn in. If $\overline{YN} = 30$, find
   a) $\overline{YS}$
   b) $\overline{SN}$



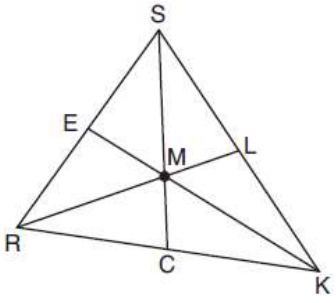
8. In the diagram below of $\triangle ABC$, medians $\overline{AD}$, $\overline{BE}$, and $\overline{CF}$ intersect at G. If $CF = 24$, what is the length of $\overline{FG}$?



9. In the diagram below of $\triangle TEM$, medians $\overline{TB}$, $\overline{EC}$, and $\overline{MA}$ intersect at D, and $TB = 9$. Find the length of $\overline{TD}$.



10. In triangle SRK below, medians $\overline{SC}$, $\overline{KE}$, and $\overline{RL}$ intersect at M.



Which statement must always be true?

1) $3(MC) = SC$
2) $MC = \frac{1}{3}(SM)$
3) $RM = 2MC$
4) $SM = KM$

11. In $\triangle XYZ$, shown below, medians $\overline{XE}$, $\overline{YF}$, and $\overline{ZD}$ intersect at C. If $CE = 5$, $YF = 21$, and $XZ = 15$, determine and state the perimeter of triangle CFX.