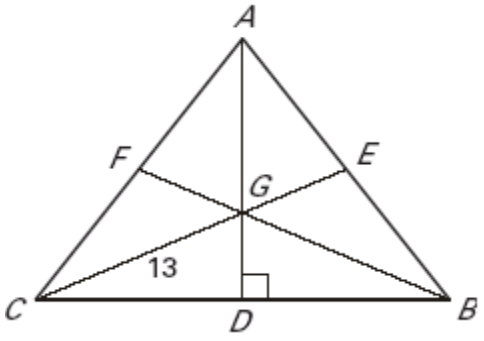
Name _____ **Date** _____

LESSON 5.4

Practice C

***G* is the centroid of ΔABC, *AD* = 15, *CG*= 13, and $\overline{AD} \perp \overline{CB}$. Find the length of the segment.**

1. $\overline{AG}$
2. $\overline{GD}$
3. $\overline{CD}$
4. $\overline{GE}$
5. $\overline{GB}$

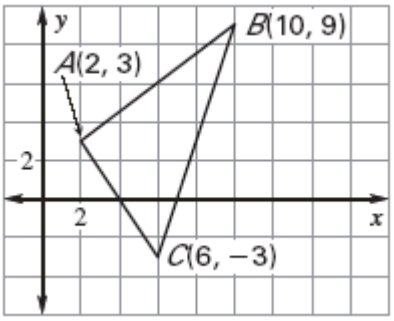


Copy and complete the statement for ΔLMN with medians $\overline{LQ}$, $\overline{NP}$, and $\overline{MO}$, and centroid *R*.

6. *MR* = ____ *MO*

   RQ = ____ *LQ*

7. Use the graph shown.
   a. Find the coordinates of *D*, the midpoint of $\overline{AB}$.
   b. Use the median $\overline{CD}$ to find the coordinates of the centroid G.
   c. Find the coordinates of *E*, the midpoint of $\overline{AC}$. Verify that $BG = \frac{2}{3} BE$.

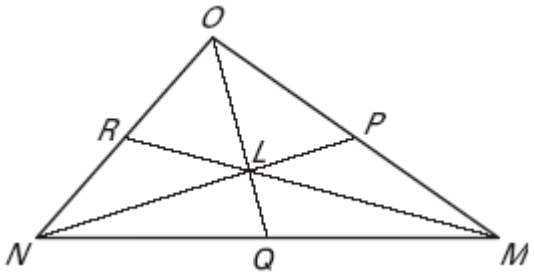


Point *L* is the centroid of ΔNOM. Use the given information to find the value of *x*.

8. *OL* = 8*x* and *OQ* = 9*x* + 6

9. *NL* = *x* + 4 and *NP* = 3*x* + 3

10. *ML* = l0*x* – 4 and *MR* = 12*x* + 18

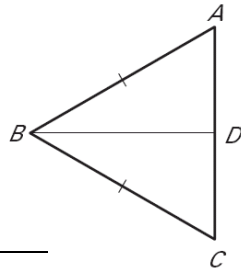


11. Proof Write a two-column or paragraph proof**.**

GIVEN: ΔABC is isosceles.

$\overline{BD}$ is the median to base $\overline{AC}$.

PROVE: $\overline{BD}$ is also an altitude.



Statements	Reasons