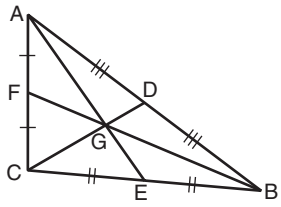
Name _____ Date _____ Class _____

LESSON 5-3

Practice B

Medians and Altitudes of Triangles

Use the figure for Exercises 1–4. $GB = 12\frac{2}{3}$ and $CD = 10$. Find each length.



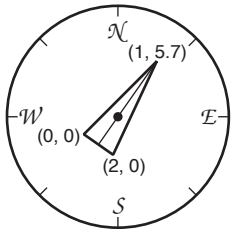
1. *FG* _____

2. *BF* _____

3. *GD* _____

4. *CG* _____

5. A triangular compass needle will turn most easily if it is attached to the compass face through its centroid. Find the coordinates of the centroid.



(_____, _____)

Find the orthocenter of the triangle with the given vertices.

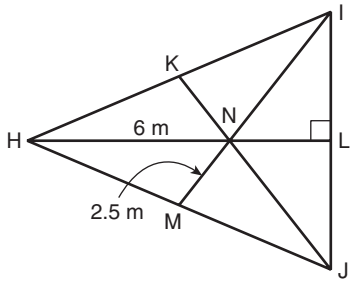
6. $X(-5, 4)$, $Y(2, -3)$, $Z(1, 4)$

(_____, _____)

7. $A(0, -1)$, $B(2, -3)$, $C(4, -1)$

(_____, _____)

Use the figure for Exercises 8 and 9. $\overline{HL}$, $\overline{IM}$, and $\overline{JK}$ are medians of $\triangle HIJ$.



8. Find the area of the triangle. _____

9. If the perimeter of the triangle is 49 meters, then find the length of $\overline{MH}$. (*Hint:* What kind of a triangle is it?)

_____

10. Two medians of a triangle were cut apart at the centroid to make the four segments shown below. Use what you know about the Centroid Theorem to reconstruct the original triangle from the four segments shown. Measure the side lengths of your triangle to check that you constructed medians. (*Note:* There are many possible answers.)