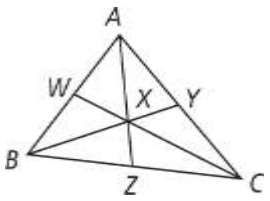
Name _____ Class _____ Date _____

5-4 Practice

Form G

Medians and Altitudes

In ΔABC, X is the centroid.



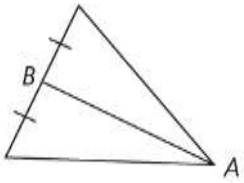
1. If $CW = 15$, find CX and XW.

2. If $BX = 8$, find BY and XY.

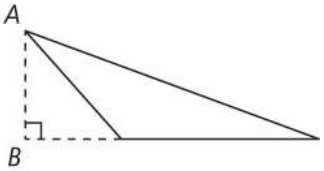
3. If $XZ = 3$, find AX and AZ.

Is $\overline{AB}$ a *median,* an *altitude,* or *neither?* Explain.

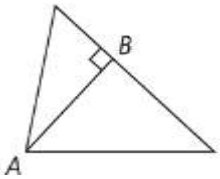
4.



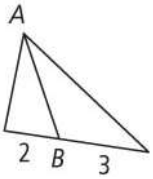
5.



6.



7.

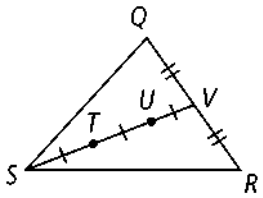


Coordinate Geometry Find the orthocenter of ΔABC.

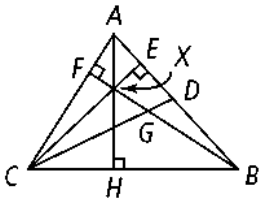
8. $A(2, 0)$, $B(2, 4)$, $C(6, 0)$

9. $A(1, 1)$, $B(3, 4)$, $C(6, 1)$

10. Name the centroid.



11. Name the orthocenter.



Draw a triangle that fits the given description. Then construct the centroid and the orthocenter.

12. equilateral ΔCDE

13. acute isosceles ΔXYZ

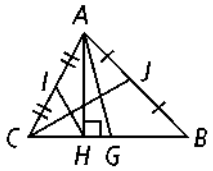
Name _____ Class _____ Date _____

5-4 Practice (continued) *Form G*

Medians and Altitudes

In Exercises 14–18, name each segment.

14. a median in ΔABC



15. an altitude for ΔABC

16. a median in ΔAHC

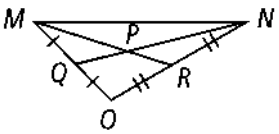
17. an altitude for ΔAHB

18. an altitude for ΔAHG

19. $A(0, 0)$, $B(0, -2)$, $C(-3, 0)$. Find the orthocenter of ΔABC.

21. In which kind of triangle is the centroid at the same point as the orthocenter?

22. P is the centroid of ΔMNO. $MP = 14x + 8y$. Write expressions to represent PR and MR.



23. F is the centroid of ΔACE. $AD = 15x^2 + 3y$. Write expressions to represent AF and FD.