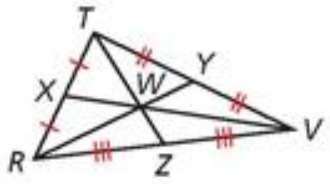
Textbook page 329-330 #1-7, 12-15, 27, 29-32

Vocabulary Apply the vocabulary from this lesson to answer each question.

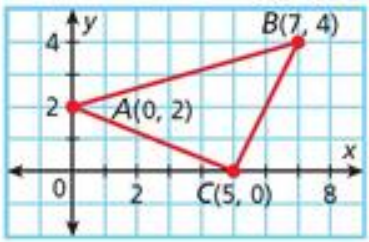
1. The ___?___ of a triangle is located $\frac{2}{3}$ of the distance from each vertex to the midpoint of the opposite side. (*centroid* or *orthocenter*)
2. The ___?___ of a triangle is perpendicular to the line containing a side. (*altitude* or *median*)

$VX = 204$, and $RW = 104$. Find each length.

3. VW
4. WX
5. RY
6. WY



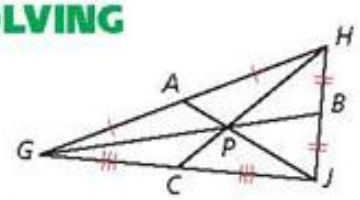
7. **Design** The diagram shows a plan for a piece of a mobile. A chain will hang from the centroid of the triangle. At what coordinates should the artist attach the chain?



PRACTICE AND PROBLEM SOLVING

$PA = 2.9$, and $HC = 10.8$. Find each length.

12. PC
13. HP
14. JA
15. JP



Algebra Find the centroid of a triangle with the given vertices.

27. $A(0, -4)$, $B(14, 6)$, $C(16, -8)$

Find each length.

29. PZ
30. PX
31. QZ
32. YZ