**Geometer’s Sketchpad**

***Concurrent Lines: Centroid***



**Construction 5.3.3: Centroid**

**Definition:**  A ***median*** of a triangle is a line segment that connects a midpoint to the opposite vertex.   
 is a median in the triangle to the right.



1. Construct . Make the sides of the triangle Thick (like you did above)
2. Construct all three midpoints and label them points as shown in the picture to the right.
3. Now construct all three medians of the triangle.  
     
     
   What do you notice about these three line segments?
4. Construct a point at their intersection and label it point .
5. Select points and and measure the distance between them.
6. Select points and and measure the distance between them.
7. Move the vertices of the triangle and compare the lengths and .  
     
   How do the lengths and compare?  
     
   Complete this equation by filling in a number in the blank:

**Theorem 5-8: Centroid**

The medians of a triangle are concurrent at the **centroid** that is the distance from each vertex to the midpoint of the opposite side.