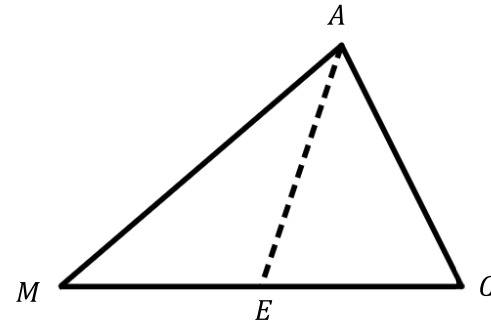


Section 7 – Topic 8 Medians in a Triangle

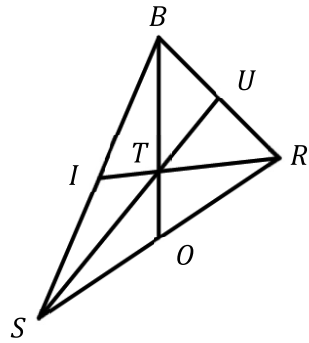
Consider the figure below.



- A _____ of a triangle is the segment from a vertex to the midpoint of the opposite side.
- Every triangle has _____ medians. Draw the other two medians in $\triangle MAC$.
- The intersection of the three medians is called the _____, which is the point of concurrency for the medians of a triangle.
- Each median creates two _____ triangles.
- The length from the vertex to the centroid is _____ the length from the centroid to the midpoint of the side, which yields a ratio of _____.

Let's Practice!

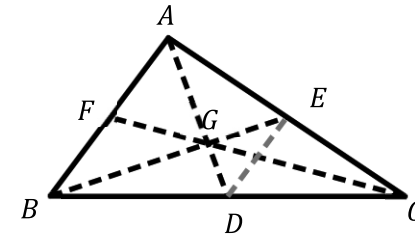
1. Gretel is creating a logo for her company. She started her design as shown below.



\overline{IR} , \overline{US} , and \overline{OB} are all medians of $\triangle BRS$, and T is the centroid. $IR = 2.4$ in, $BT = 1$ in, $UT = 0.7$ in. Find RT , TI , OB , and US .

Try It!

2. Consider the figure below.

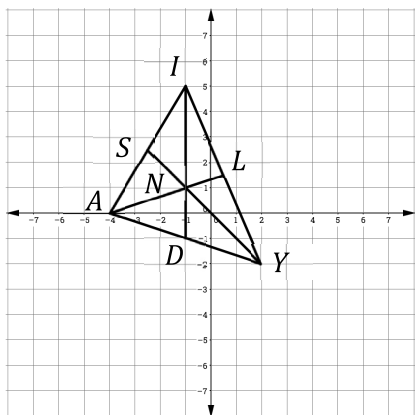


Given: D , E and F are all midpoints of each of the sides of $\triangle ABC$, and G is the point where \overline{AD} , \overline{BE} , and \overline{CF} meet.

Prove: \overline{AD} , \overline{BE} , and \overline{CF} are all medians concurrent at G and G is one-third of the distance from the opposite side to the vertex along the median.

BEAT THE TEST!

1. Consider the triangle below.



Prove that the ratio of the median from the point of concurrency is 2:1 using two methods, the coordinate geometry of the medians and triangles similarity.