H.Geometry – Chapter 4 – Definition Sheet

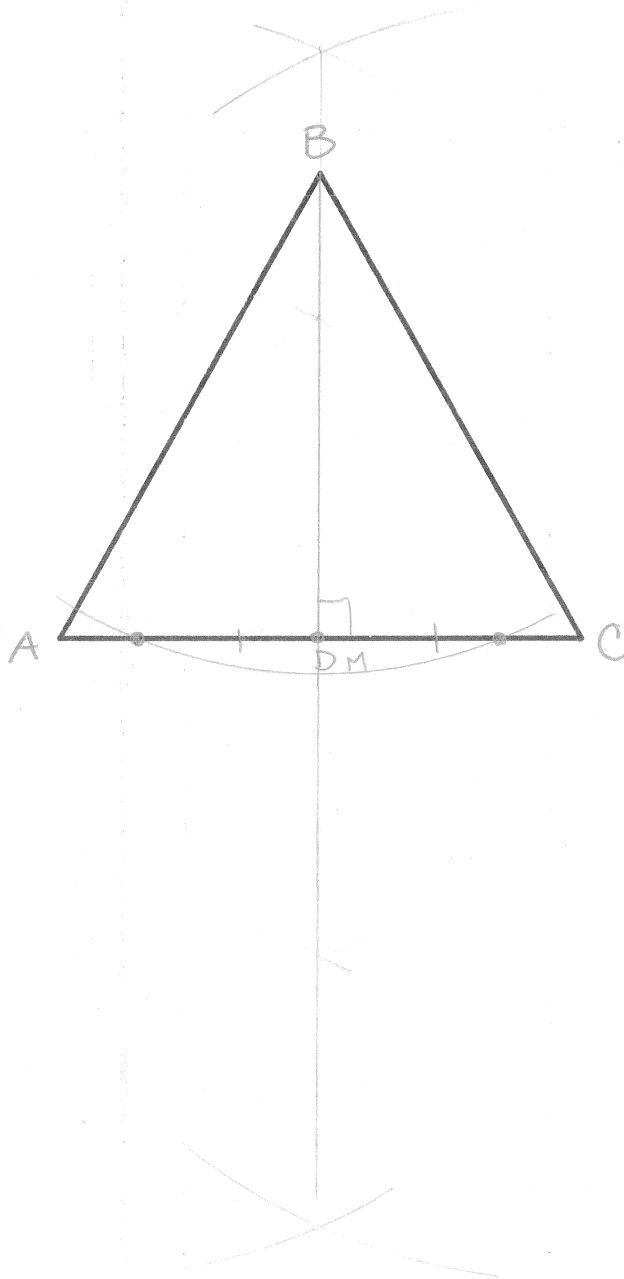|	
Vertical Angle Bisector Theorem	In an Isosceles Triangle, the angle bisector of the vertex angle is also the <u>altitude to the base</u>, the <u>median to the</u> <u>base</u> and the <u>⊥ bisector to the base.</u>

construct altitude
$\overline{BD}$

construct median
$\overline{BM}$

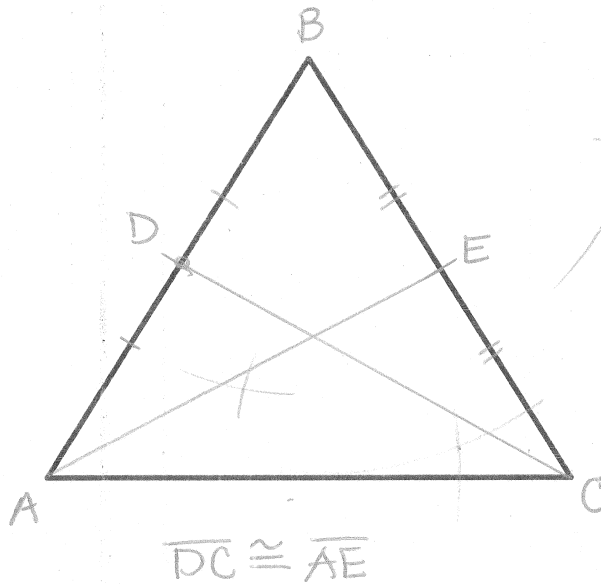construct ⊥ bisector
of $\overline{AC}$

conclusion:
 they are all the
same segment!

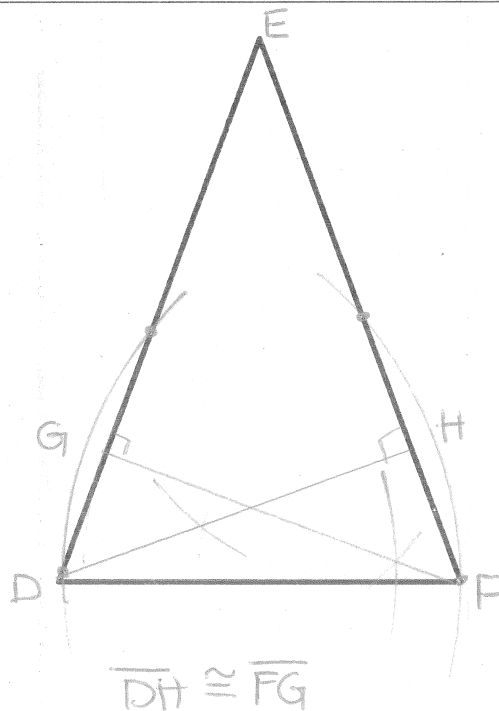|	
How do the medians of an isosceles triangle relate to each other? construct median $\overline{CD}$ and $\overline{AE}$	 $\overline{DC} \cong \overline{AE}$
Isosceles Triangle Medians Theorem	In an Isosceles Triangle, the medians to the legs are __congruent__
How do the altitudes of an isosceles triangle relate to each other? construct altitudes $\overline{FG}$ and $\overline{DH}$	 $\overline{DH} \cong \overline{FG}$
Isosceles Triangle Altitudes Theorem	In an Isosceles Triangle, the altitudes to the legs are __congruent__