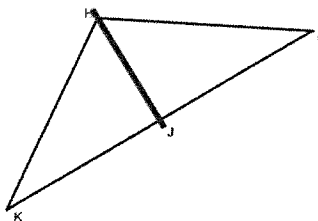
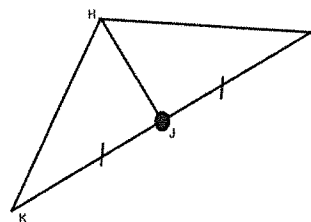


# 9 Most Common Properties, Definitions & Theorems for Triangles

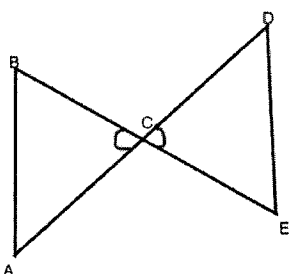
**1. Reflexive Property:  $AB = BA$**   
 When the triangles have an angle or side in common



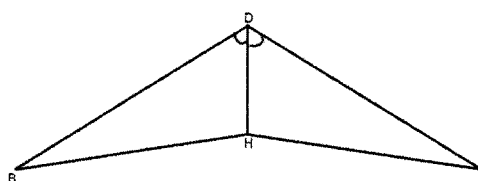
**6. Definition of a Midpoint**  
 Results in two segments being congruent



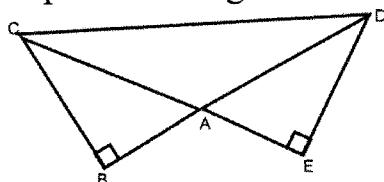
**2. Vertical Angles are Congruent**  
 When two lines are intersecting



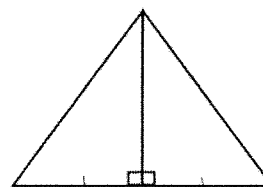
**7. Definition of an angle bisector**  
 Results in two angles being congruent



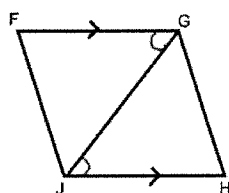
**3. Right Angles are Congruent**  
 When you are given right triangles and/or a square/ rectangle



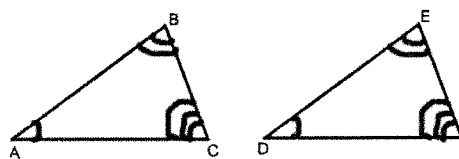
**8. Definition of a perpendicular bisector**  
 Results in 2 congruent segments and right angles.



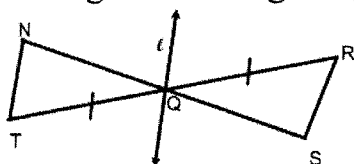
**4. Alternate Interior Angles of Parallel Lines are congruent**  
 When the givens inform you that two lines are parallel



**9. 3<sup>rd</sup> angle theorem**  
 If 2 angles of a triangle are  $\cong$  to 2 angles of another triangle, then the 3<sup>rd</sup> angles are  $\cong$



**5. Definition of a segment bisector**  
 Results in 2 segments being congruent



***Note:* DO NOT ASSUME ANYTHING IF IT IS NOT IN THE GIVEN**