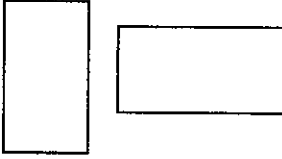




Section 3.2  <i>Properties and Conclusions from Markings</i>	Name: _____  Date: _____ Period: _____	
Essential Question	How can I use the reflexive, transitive and symmetric properties and other symbols in geometry?	
Reflexive Property	$a = a$  Domino A = Domino A	
Transitive Property	If $a = b$ and $b = c$ , then $a = c$ .  Domino A causes B to fall, B causes C to fall, then domino A caused C to fall.	
Symmetric Property	If $a = b$ , then $b = a$ .  Domino A causes B to fall then domino B can cause A to fall.	
Tick Marks or Hatch Marks	Short line segments to show congruency.  Single tick marks show one congruent set.  Double tick marks show another congruent set.	Picture:  
Arrowheads	Arrowheads indicate parallel lines.  Single arrowheads show one parallel set.  Double arrowheads show another parallel set.	Picture:  
Small Square	A small square at the vertex of an intersection indicates perpendicular lines.  <div style="text-align: right;">Picture: </div>	

Symbols save time and space when writing. Here are the most common geometrical symbols:

Symbol	Meaning	Example	In Words
$\triangle$	<u>Triangle</u>	$\triangle ABC$ has 3 equal sides	<i>Triangle ABC has three equal sides</i>
$\angle$	<u>Angle</u>	$\angle ABC$ is $45^\circ$	<i>The angle formed by ABC is 45 degrees.</i>
$\perp$	<u>Perpendicular</u>	$AB \perp CD$	<i>The line AB is perpendicular to line CD</i>
$\parallel$	<u>Parallel</u>	$EF \parallel GH$	<i>The line EF is parallel to line GH</i>
$^\circ$	<u>Degrees</u>	$360^\circ$ makes a full circle	
$\text{L}$	<u>Right Angle</u> ( $90^\circ$ )	$\text{L}$ is $90^\circ$	<i>A right angle is 90 degrees</i>
$\overline{AB}$	Line Segment "AB"	AB	<i>The line between A and B</i>
$\overleftrightarrow{AB}$	Line "AB"	$\overleftrightarrow{AB}$	<i>The infinite line that includes A and B</i>
$\overrightarrow{AB}$	Ray "AB"	$\overrightarrow{AB}$	<i>The line that starts at A, goes through B and continues on</i>
$\cong$	<u>Congruent</u> (same shape and size)	$\triangle ABC \cong \triangle DEF$	<i>Triangle ABC is congruent to triangle DEF</i>
$\sim$	<u>Similar</u> (same shape, different size)	$\triangle DEF \sim \triangle MNO$	<i>Triangle DEF is similar to triangle MNO</i>
$\therefore$	Therefore	$a=b \therefore b=a$	<i>a equals b, therefore b equals a</i>