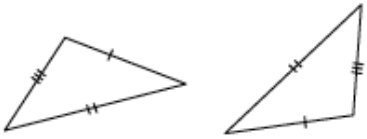
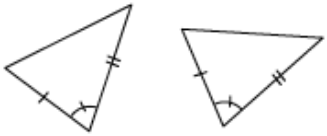
Integrated Math 2 – Chapter 2 Toolkit Name: Period:

Triangle Congruence Theorems

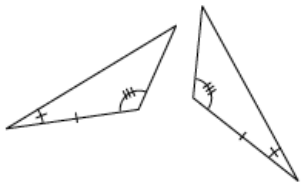
SSS ≅



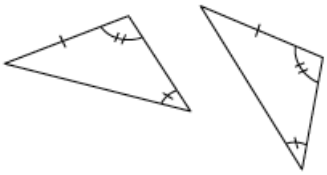
SAS ≅



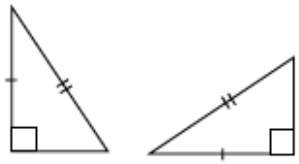
ASA ≅



AAS ≅

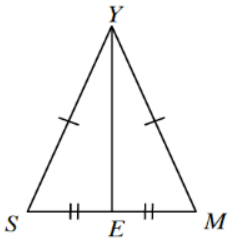


HL ≅

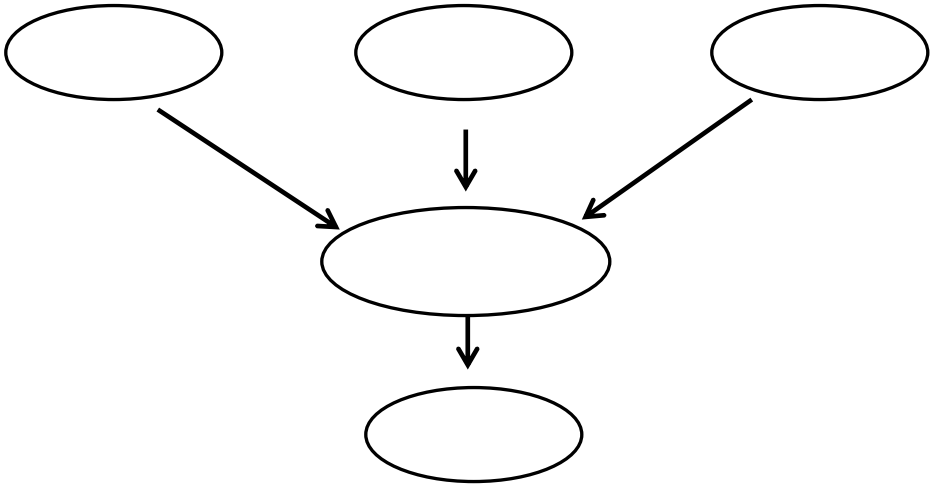


NOT Triangle Congruence Theorems:

Reflexive: A property that refers to a shared side or a shared angle.



Flowchart: Using the figure given at the left, prove that ∠S ≅ ∠M.



Conditional Statements and Converses

In a **conditional statement**, the 'if' portion of the statement is called the _____.

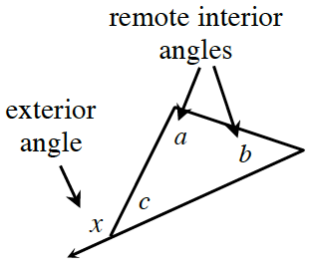
The 'then' portion is called the _____. If you reverse the order of the hypothesis and the conclusion, you create the _____ of the statement.

Example:

Conditional Statement:

Converse:

Exterior Angle Theorem



If $\angle x + \angle c = 180$ by _____, and

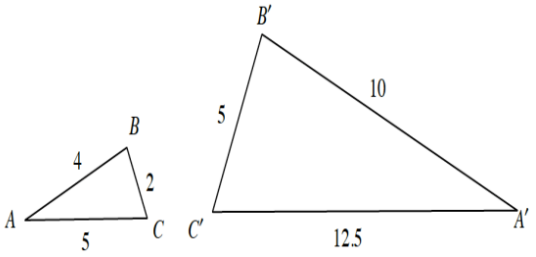
$\angle a + \angle b + \angle c = 180$ by _____, then

$\angle x$ **must equal** _____ by

_____.

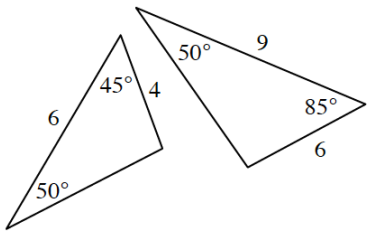
This is called the ***Exterior Angle Theorem.*** ***It states that, the measure of an exterior angle of a triangle equals*** _____

Similar Polygons **have congruent corresponding angles and proportional corresponding side lengths.**

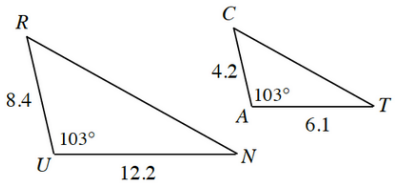


Complete Conditions for Triangle Similarity

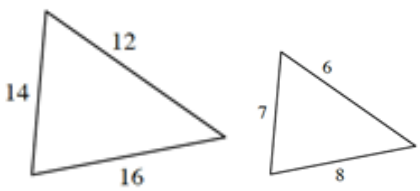
AA~



SAS~



SSS~



Solving Systems of Equations

Equal Value Method	Substitution Method	Elimination Method
$y = 2x - 7$ $y = 5x - 16$	$-3x + y = -6$ $x = y - 4$	$3x + 2y = 11$ $7x + 3y = 29$
Set equations equal to each other and solve for the variable.	Substitute one equation into the other:	*Rewrite* one or both equations by multiplying by a constant so one of the variables will be eliminated. Multiply top equation by _____ Multiply bottom equation by ____ $3x + 2y = 11$ $7x + 3y = 29$
Go back to one of the original equations, substitute, and solve for the other variable.	Go back to one of the original equations, substitute and solve for the other variable.	Go back to one of the original equations, substitute, and solve for the other variable.
Check both x and y in the **other** equation.	Check both x and y in the **other** equation.	Check both x and y in the other equation.
Write your solution as an ordered pair.	Write your solution as an ordered pair.	Write your solution as an ordered pair.