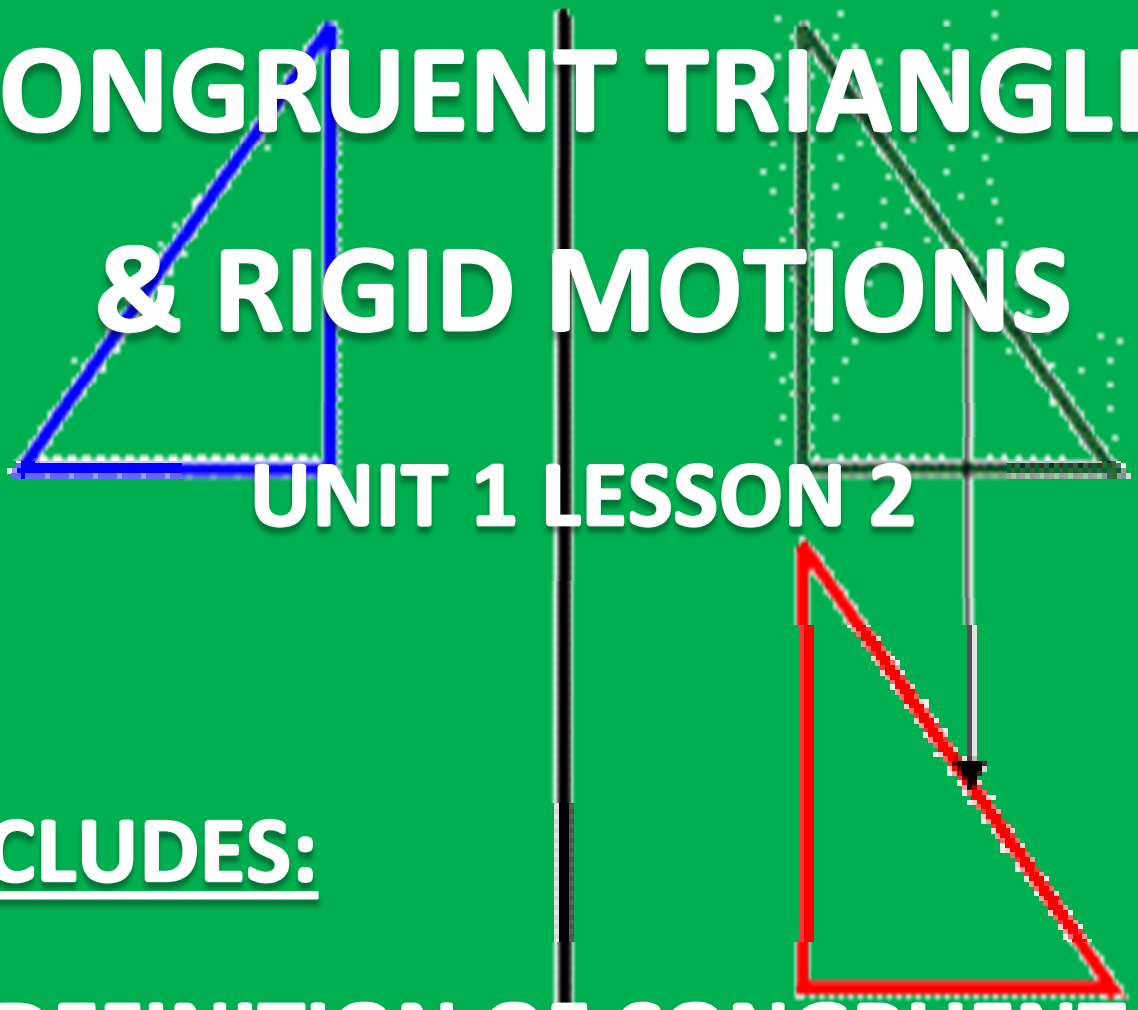
CONGRUENT TRIANGLES & RIGID MOTIONS

UNIT 1 LESSON 2



INCLUDES:

- DEFINITION OF CONGRUENT
- GUIDED NOTES W/EXAMPLES
- RIGID MOTION STATEMENT
- HOMEWORK ASSIGNMENT
- ANSWER KEY

Name: _____ CC Geometry Period: ____ Date:_____

1-3: Congruent Triangles & Rigid Motions

By the end of the period, I can understand what a rigid motion is in the coordinate plane.

Do Now: Based on your knowledge, write a description of the following Transformations.

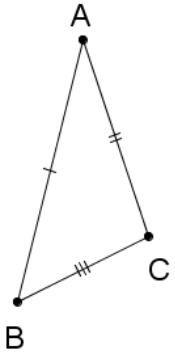
Translation:

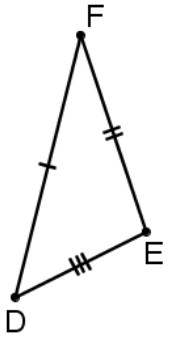
Reflection

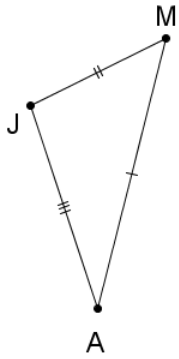
Rotation

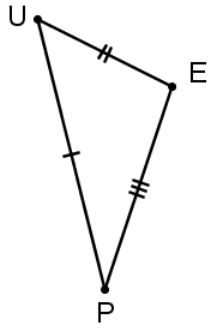
Definition of Congruent Shapes:

Example: **Name the congruent sides and angles of the following triangles**

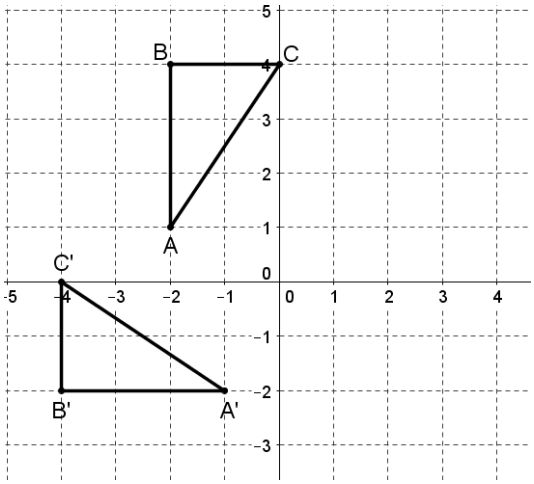


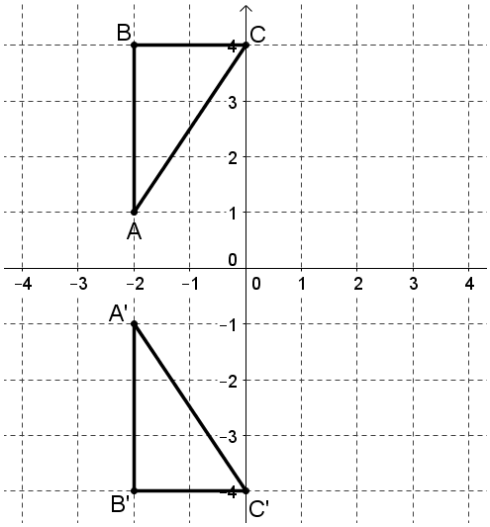


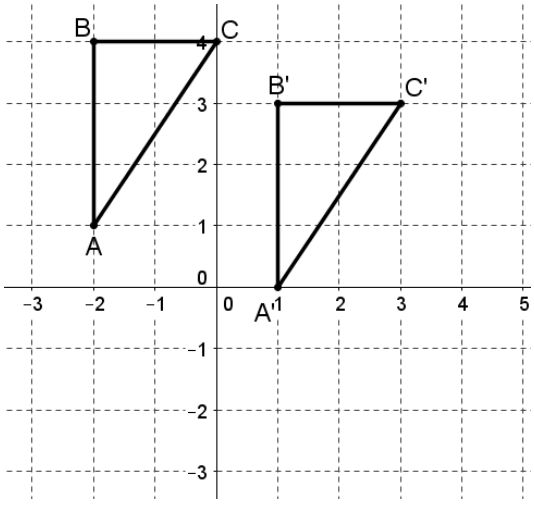




Showing Triangles are congruent using rigid motions





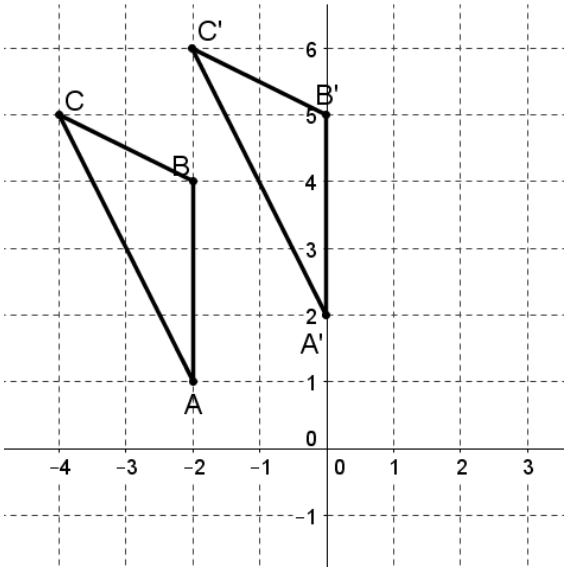


Name: _____ **CC Geometry Period:** ____ **Date:**_____

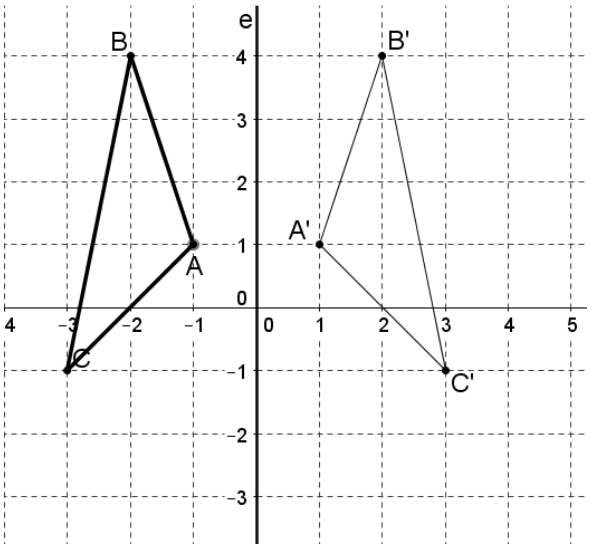
Homework 1-3: Congruence and Rigid Motions

#1-3: Explain why the following triangles are congruent using rigid motions.

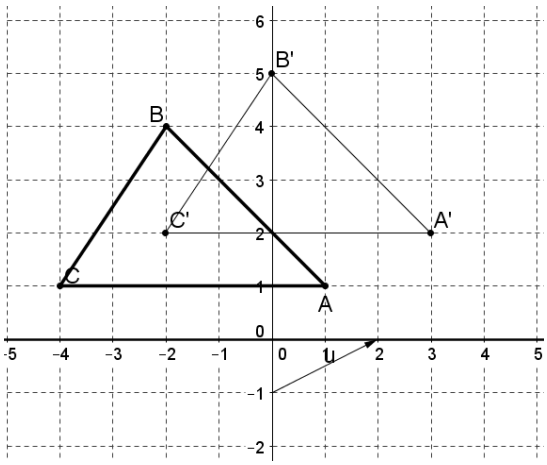
1.



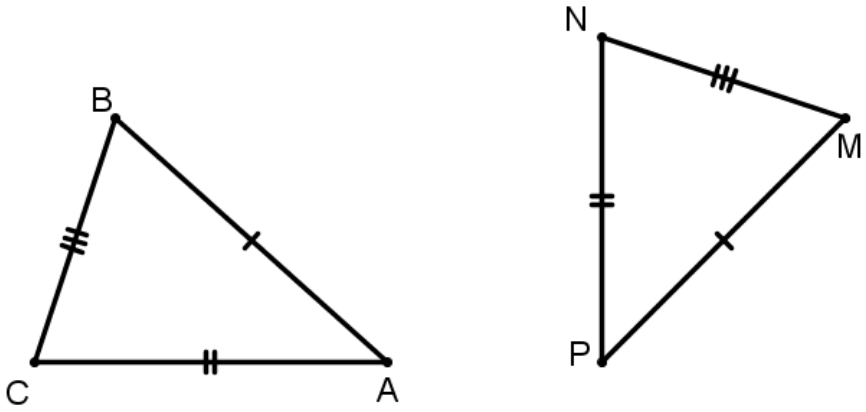
2.



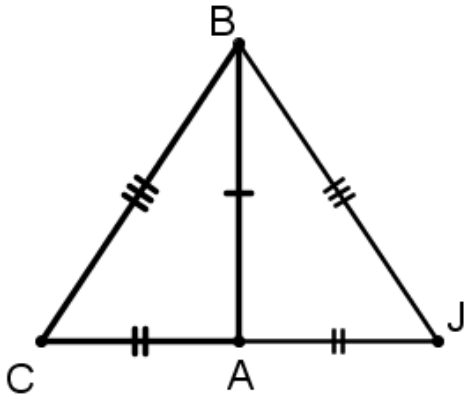
3.



4. Write out all the congruent sides and angles and write out a congruence statement for the triangles.



5. Write out all the congruent sides and angles and then write out a congruence statement for the triangles.



Name: _____ **CC Geometry Period:** ____ **Date:**_____

1-3: Congruent Triangles & Rigid Motions ANSWERS

By the end of the period, I can understand what a rigid motion is in the coordinate plane.

Do Now: Based on your knowledge, write a description of the following Transformations.

Translation: **SLIDE**

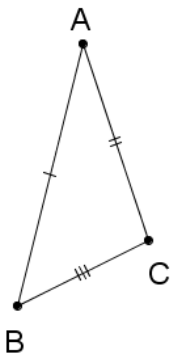
Reflection: **FLIP**

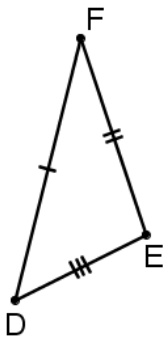
Rotation: **TURN**

Definition of Congruent Shapes: **Shapes that are the same size in all aspects (Angles and Sides**

Example: **Name the congruent sides and angles of the following triangles**

Stress the Importance of Order of the letters!

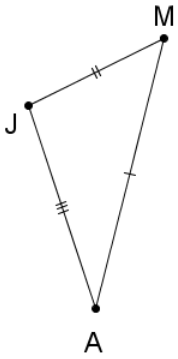


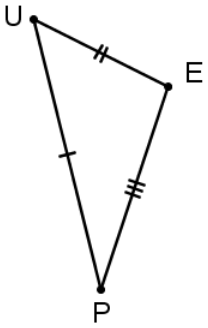


ΔABC≅ΔFDE

$\overline{AB} \cong \overline{FD}$ $\overline{AC} \cong \overline{FE}$ $\overline{CB} \cong \overline{ED}$

∠A≅∠F ∠B≅∠D ∠C≅∠E





ΔAMJ≅ΔPUE

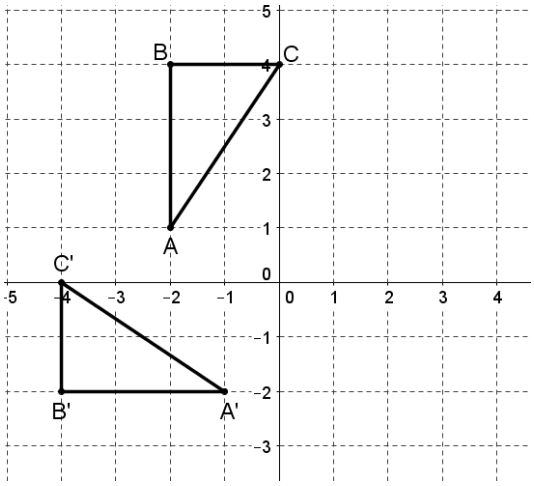
$\overline{AM} \cong \overline{PU}$ $\overline{MJ} \cong \overline{UE}$ $\overline{AJ} \cong \overline{PE}$

∠A≅∠P ∠E≅∠J ∠M≅∠U

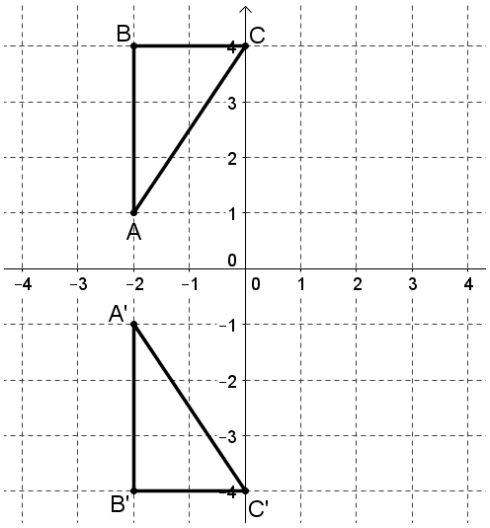
Showing Triangles are congruent using rigid motions

A _____ is a Rigid Motion and In a rigid motion size is preserved!

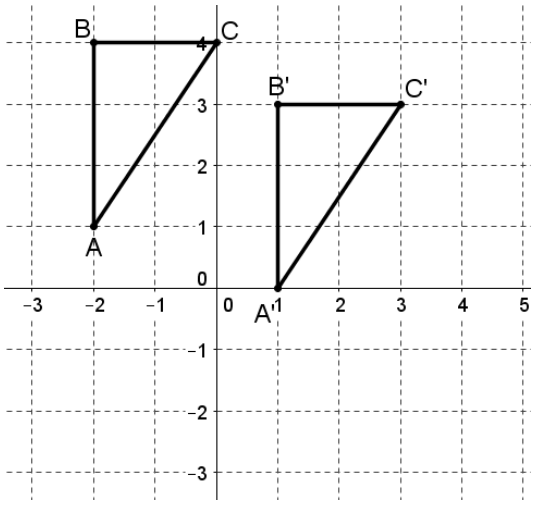
USE PATTY PAPER TO HAVE STUDENTS UNDERSTAND WHY THESE ARE CONGRUENT



A Rotation of 90° Counter Clockwise around the origin is a Rigid Motion and in a Rigid Motion Size is preserved



A Reflection over the x-axis is a Rigid Motion and in a Rigid Motion Size is preserved



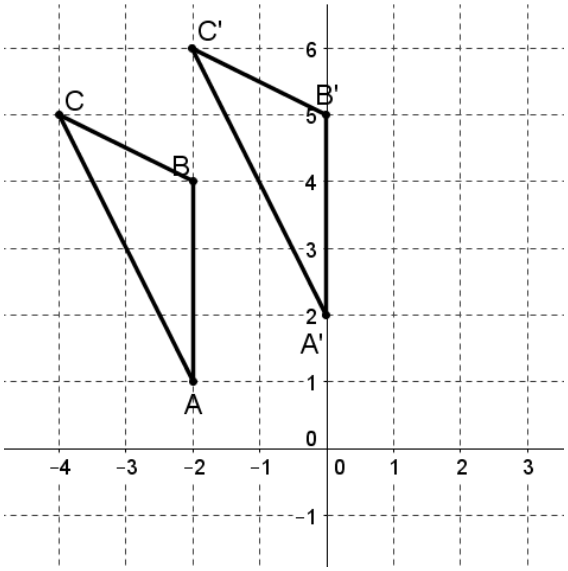
A Translation to the right 3 and down 1 is a Rigid Motion and in a Rigid Motion Size is preserved

Name: _____ **CC Geometry Period:** ____ **Date:**_____

Homework 1-3: Congruence and Rigid Motions

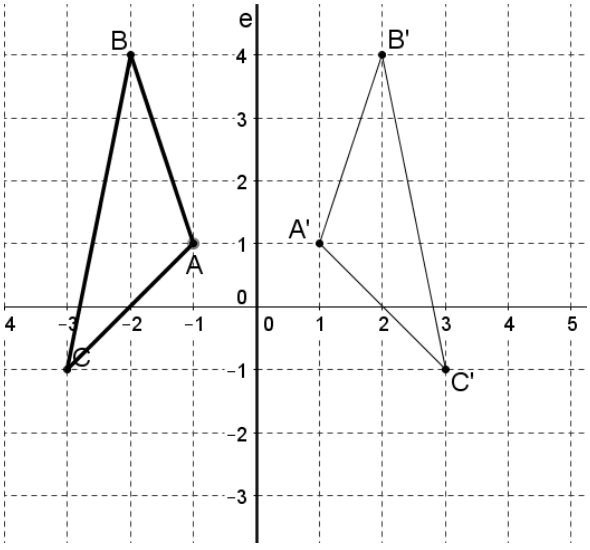
#1-3: Explain why the following triangles are congruent using rigid motions.

1.



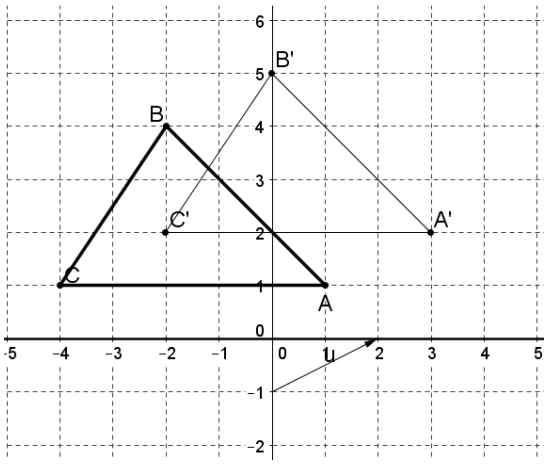
A Translation to the right 2 and up 1 is a Rigid Motion and in a Rigid Motion Size is preserved

2.



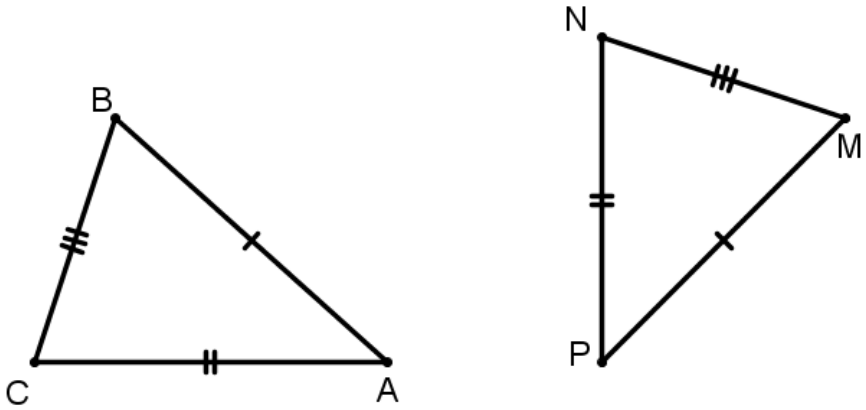
A Reflection over the y-axis is a Rigid Motion and in a Rigid Motion Size is preserved

3.



A Translation to the right 2 and up 1 is a Rigid Motion and in a Rigid Motion Size is preserved

4. Write out all the congruent sides and angles and write out a congruence statement for the triangles.

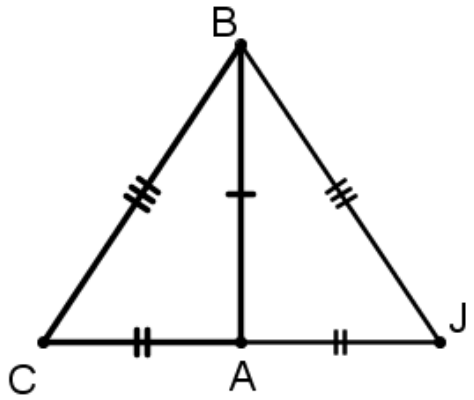


ΔABC≅ΔPMN

$\overline{AB} \cong \overline{PM}$ $\overline{AC} \cong \overline{PN}$ $\overline{CB} \cong \overline{NM}$

∠A≅∠P ∠B≅∠M ∠C≅∠N

5. Write out all the congruent sides and angles and then write out a congruence statement for the triangles.



ΔABC≅ΔABJ

$\overline{AB} \cong \overline{AB}$ $\overline{AC} \cong \overline{AJ}$ $\overline{CB} \cong \overline{JB}$

∠C≅∠J ∠BAC≅∠BAJ ∠ABC≅∠ABJ