



WELCOME

Math 2

Chapter 5/6: Triangle Congruency Theorems

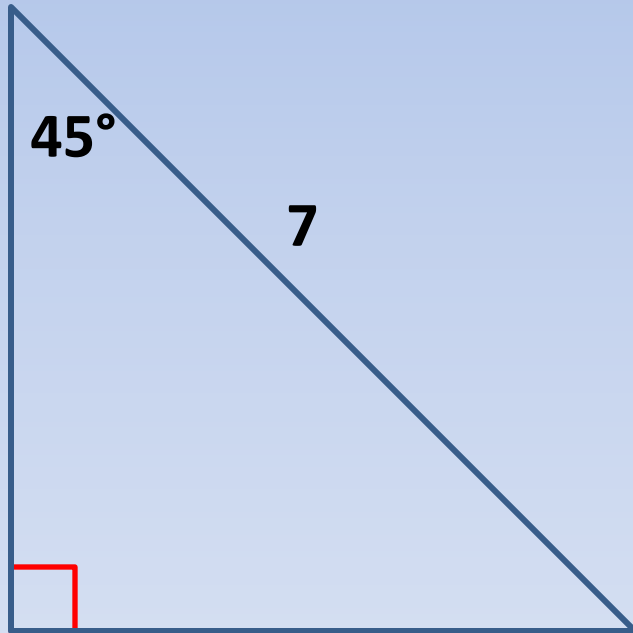
Last Night's HW: None

Tonight's HW: 5.1 Worksheet

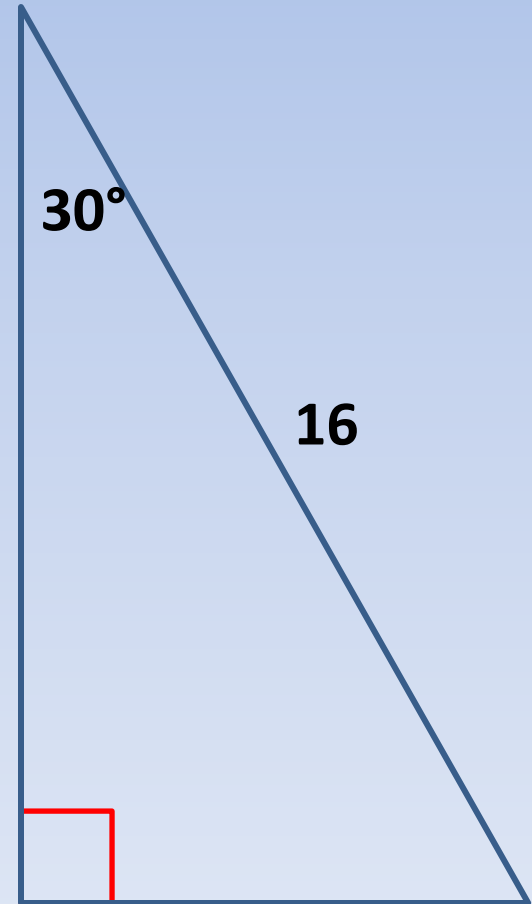
Warm Up

Find the missing sides in the special right triangles:

1.



2.



Chapter 5-6 Learning Targets

Math 2 Chapter 5-6: Triangle Congruence Theorems

	Learning Target	Text	I know it	I partially get it	I don't get it
A	I can state postulates or theorems that can be used to prove two triangles are congruent.	5.2			
B	I can prove that two triangles are congruent using the Side-Side-Side congruence theorem.	5.3			
C	I can prove that two triangles are congruent using the Side-Angle-Side congruence theorem.	5.4			
D	I can prove that two triangles are congruent using the Angle-Side-Angle congruence theorem.	5.5			
E	I can prove that two triangles are congruent using the Angle-Angle-Side congruence theorem.	5.6			
F	I can use right triangle congruence theorems to prove right triangles are congruent (HL).	6.1			
G	I can use corresponding parts of congruent triangles (CPCTC) to prove angles and segments are congruent.	6.2			
H	I can solve problems using the Isosceles Triangle Base Theorem and its converse.	6.2			
I	I can write the inverse and contrapositive of a conditional statement.	6.4			
J	I can perform basic transformations on the coordinate plane	5.1			

Chapter 5 Section 1 Learning target

J

I can perform basic transformations on the coordinate plane

5.1

Transformation Basics Review

Figures in a plane can be reflected, rotated, or translated to produce new figures.



Preimage:

The original version of the figure be transformed

Image:

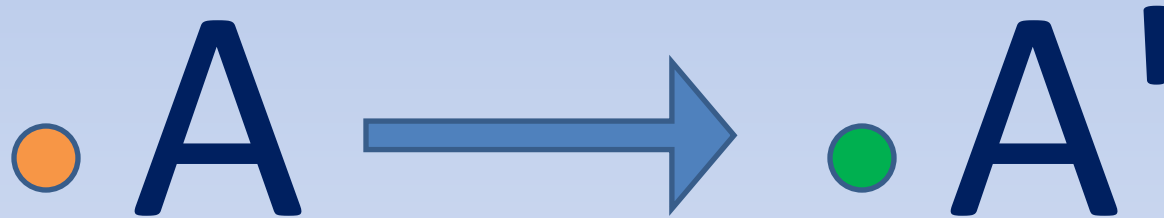
The new version of the figure being transformed

Transformation:

The operation that maps, or moves, the preimage onto the image

Image Notation

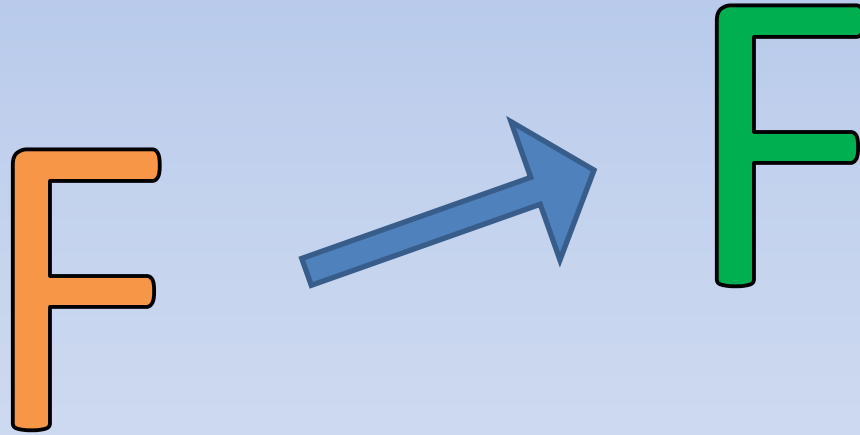
Use the symbol from the previous image and add a prime symbol



“The **preimage** “A” maps to the **Image** “A” Prime”

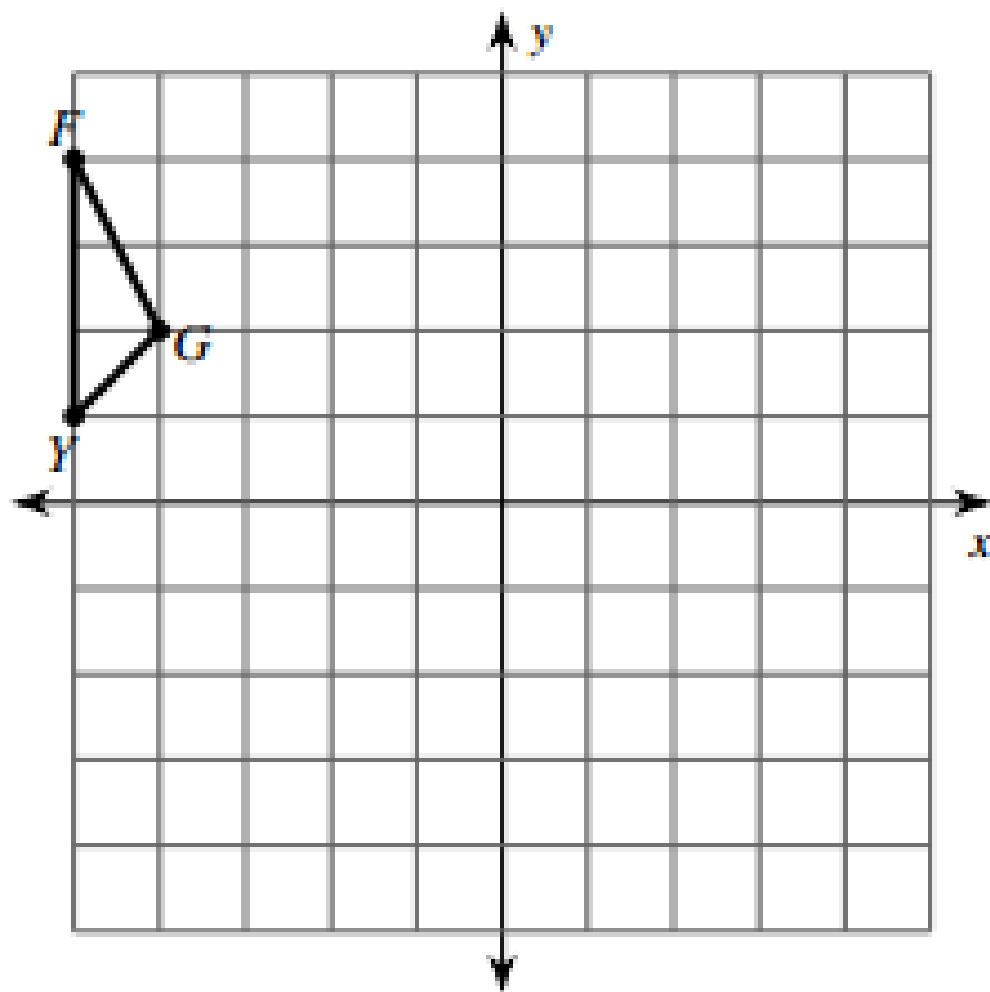
Translation

The mapping of a figure from one location onto another location while keeping the orientation.



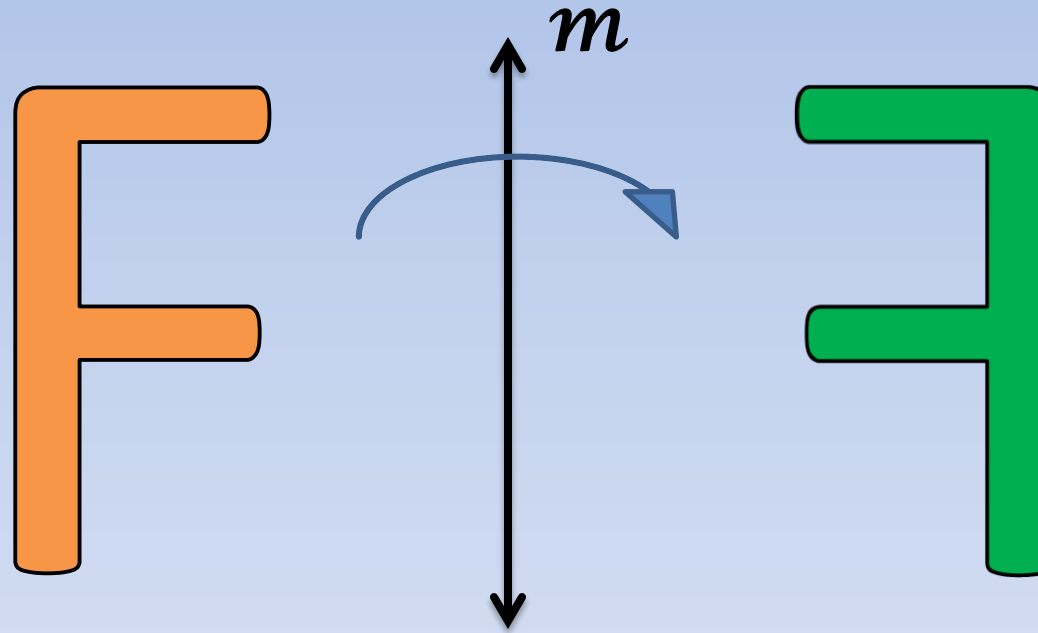
“The **preimage** is transported onto the **Image**”

2) translation: 4 units right and 1 unit down



Reflection

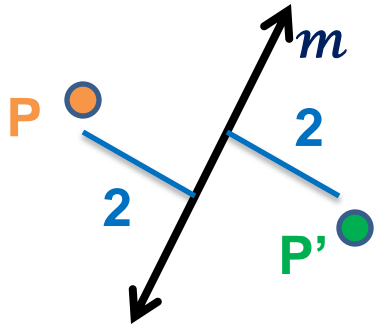
A transformation that uses a line like a mirror in order to reflect a figure to the opposite side



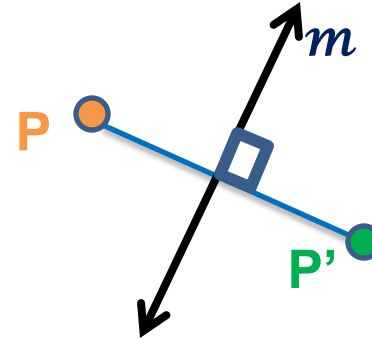
The line m is the “Line of Reflection”

Requirements For Reflections

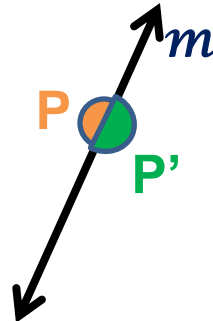
1. Points are reflected equal distance from line of reflection



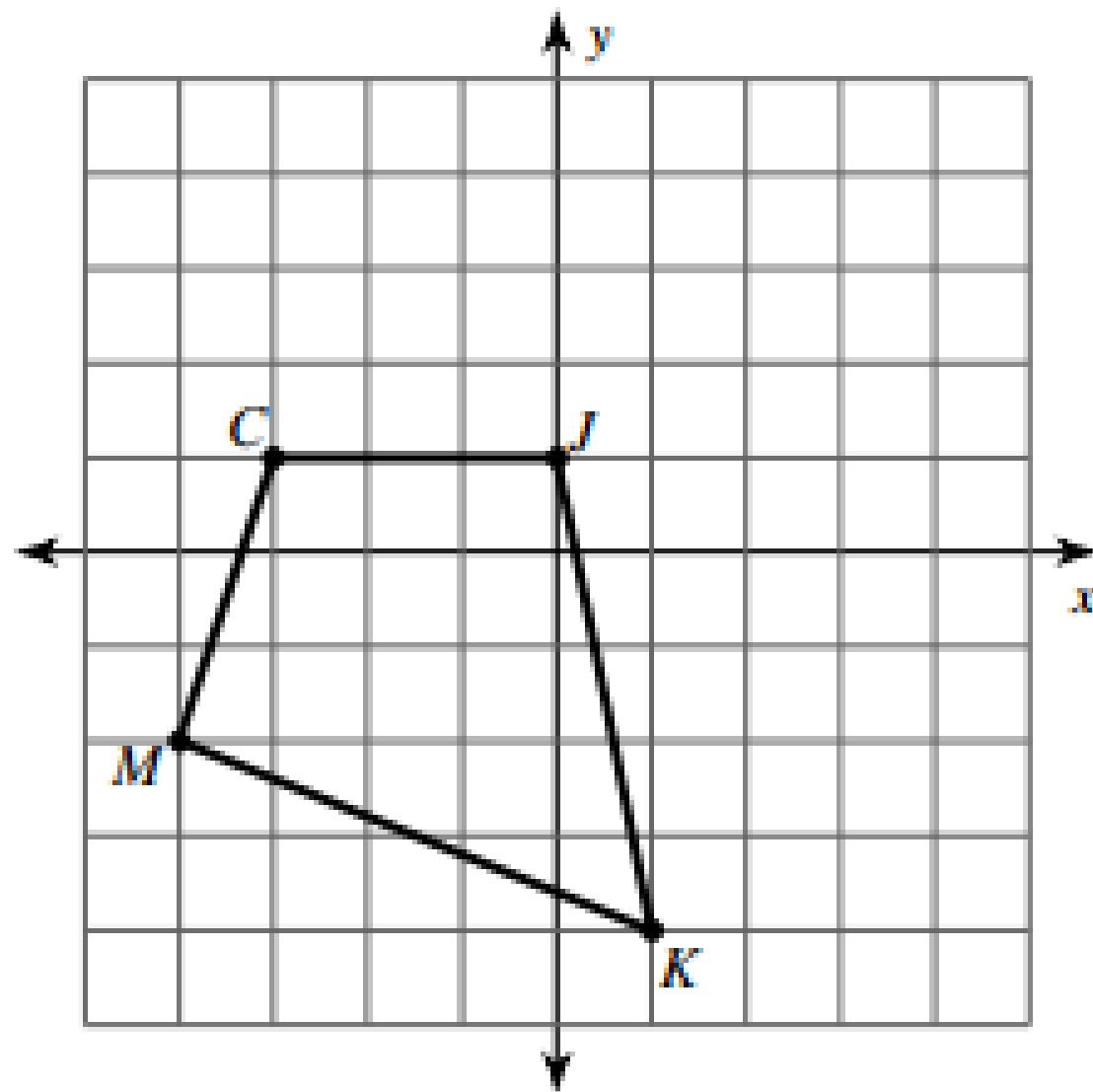
2. Reflected perpendicular to line of reflection.



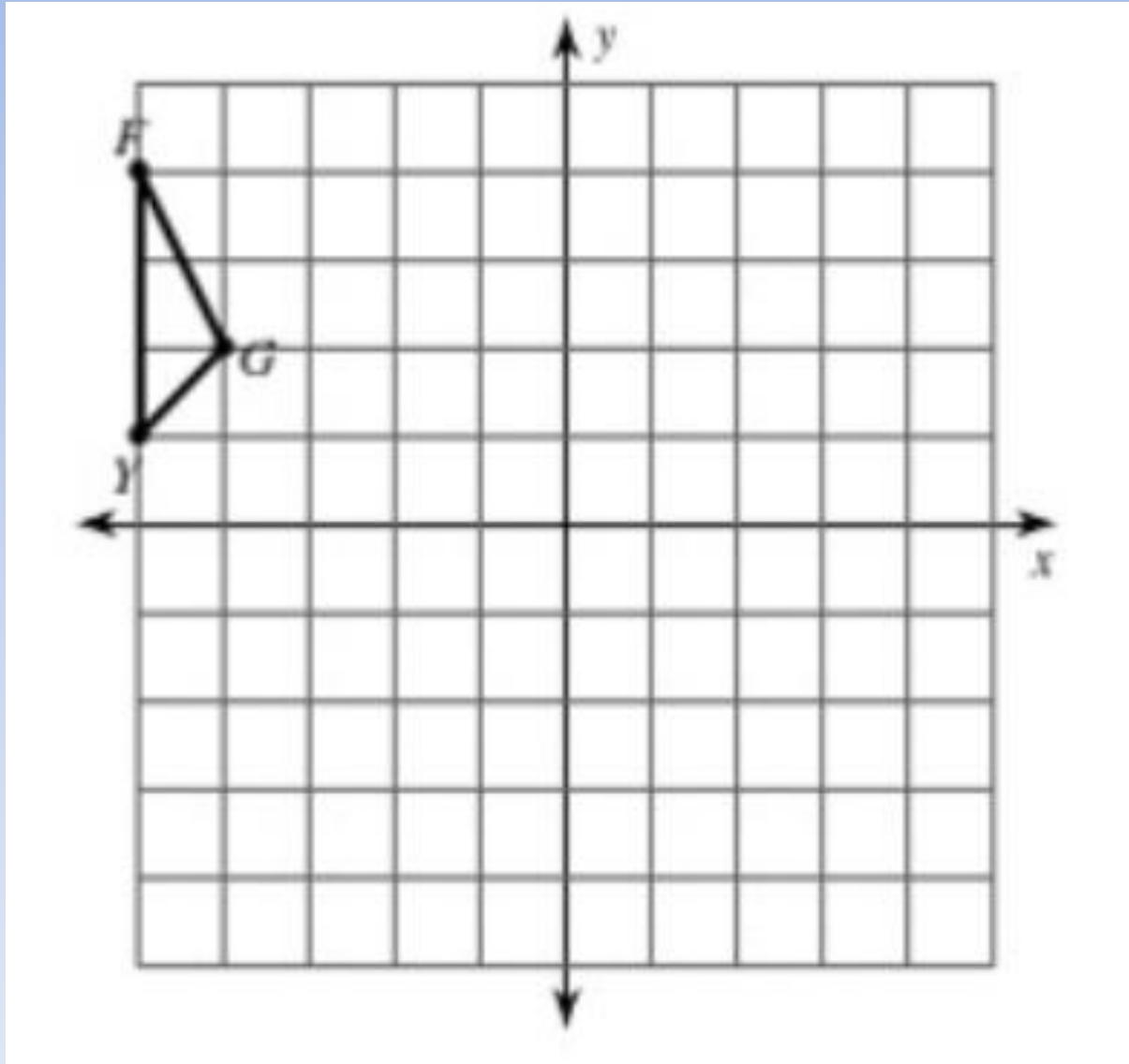
3. If P is on line then stays on line



4) reflection across the x-axis

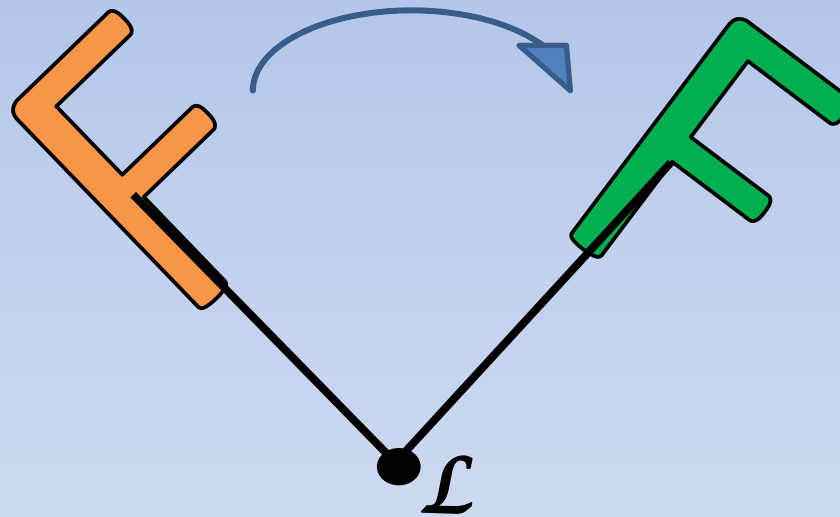


Reflect across the line $y=x$



Rotation

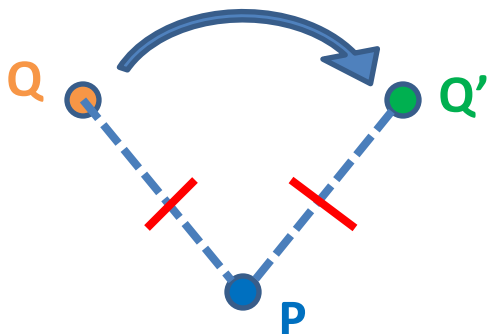
A transformation that rotates a figure around a fixed point



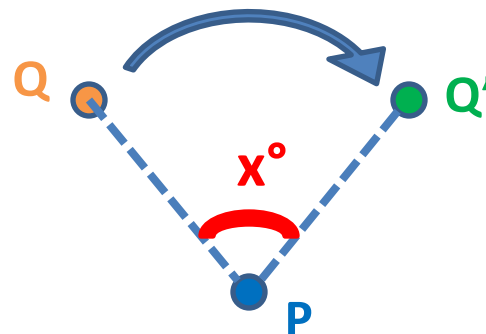
- The point \mathcal{L} is called the “Center of Rotation”
- Rays extended from \mathcal{L} give the “Degree of Rotation”

Requirements For Rotation

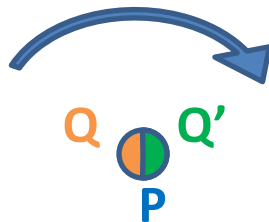
1. Points stay equal distance from the center of rotation



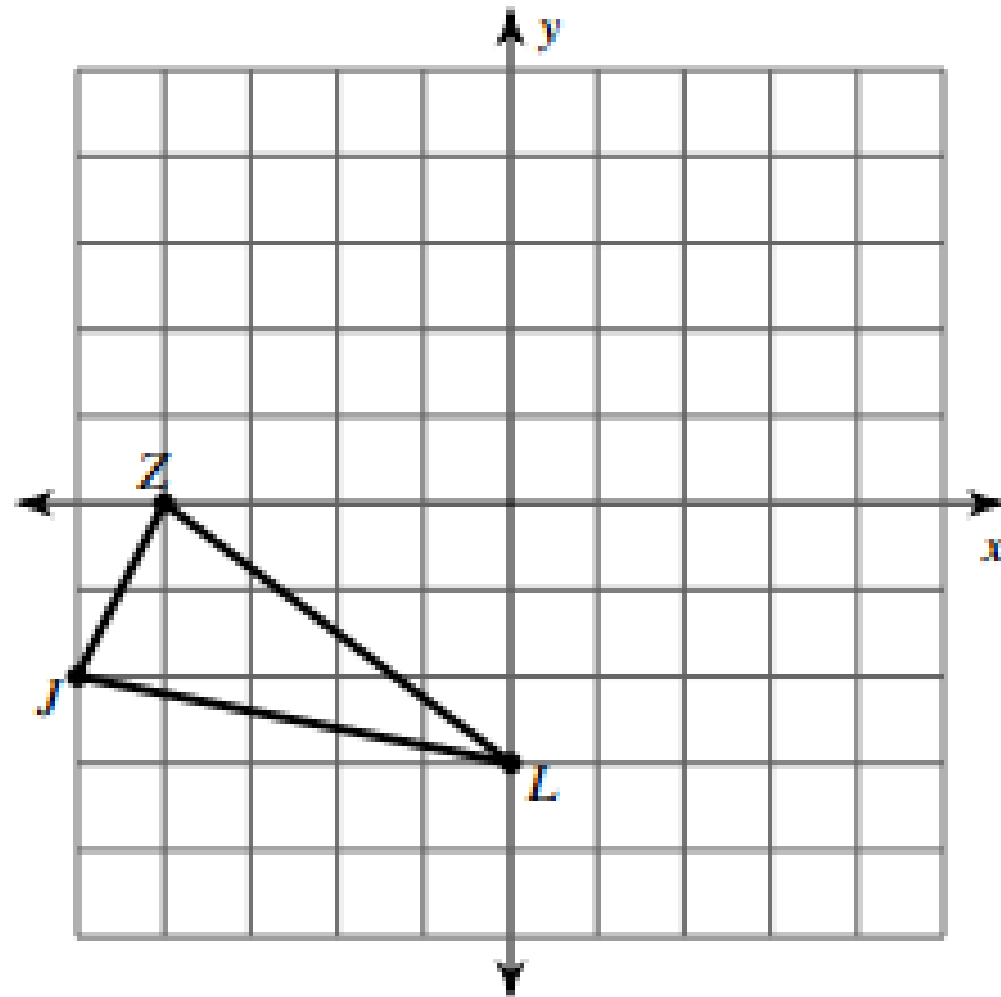
2. All points move in the same direction and amount.



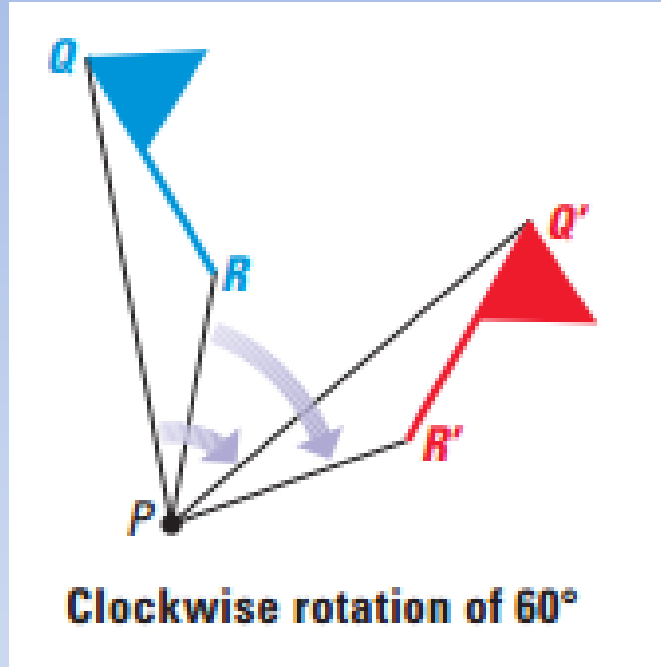
3. If point Q is on center then stays



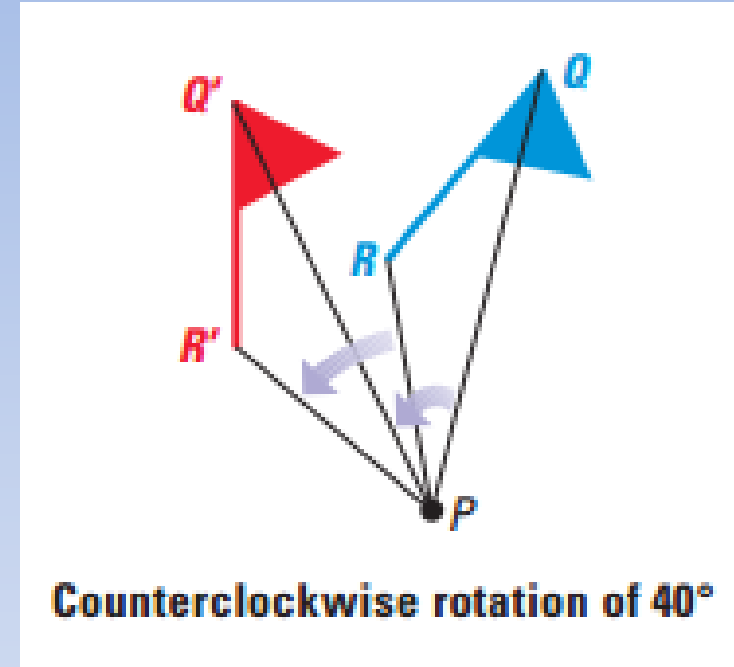
1) rotation 90° counterclockwise about the origin



Rotation Direction



Clockwise: The figure travels in the same direction of the hands on a clock



Counter Clockwise: The figure travels the opposite direction of the hands on a clock