

EQ: G.CO.2 What are transformations?

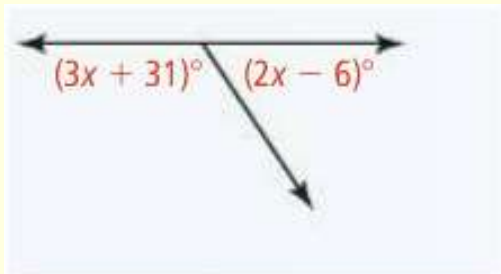
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<p>Week 6, Lesson 1</p> <ol style="list-style-type: none"> 1. Warm Up 2. Proficiency Graph 3. TI-Nspire activity 4. Closure <p style="font-size: 48pt; font-weight: bold;">44</p>	<p style="text-align: center;">Transformations</p> <div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <div style="font-size: 48pt; font-weight: bold;">45</div> </div>
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Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

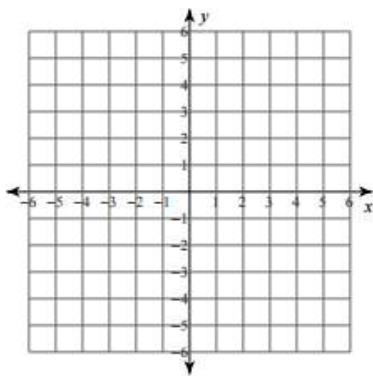
Warm Up:

Find the value of x and the measure of each angle.

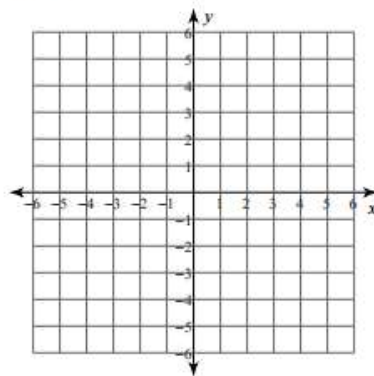


Sketch the graph of each line.

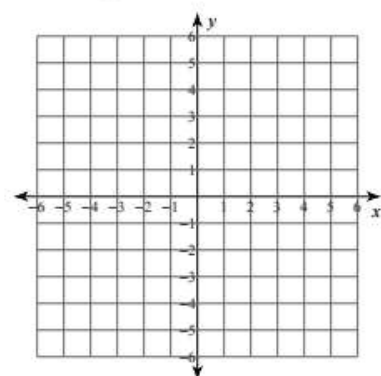
1) $y = \frac{7}{2}x - 2$

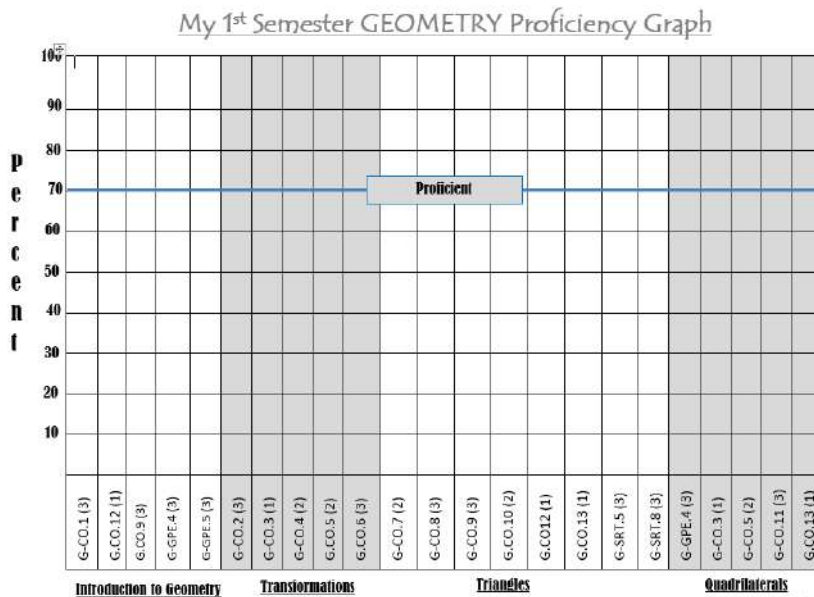


6) $x = 5$



9) $y = -\frac{1}{3}x + 3$





(3) = Essential
 (2) = Supportive
 (1) = Marginal



Date Assigned
8/7/2015
8/11/2015
8/17/2015
8/18/2015
8/20/2015
8/26/2015
8/27/2015

How to change your grade...

#1 → **G-CO.1—Tutor**

MUST COMPLETE IN ORDER TO TAKE RECOVERY QUIZ
 NAME: _____ HOUR: _____

Teacher Signature Tutoring Complete and Date:

#2 → Recovery Quiz Name _____
 Geometry 1: Introduction to geometry

EQ: G.CO.2 How do I graph translations?

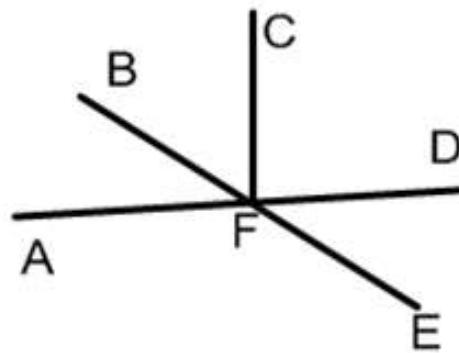
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<p>Week 6, Lesson 2</p> <ol style="list-style-type: none"> 1. Warm Up 2. Notes 3. Practice 4. Closure 	<p style="text-align: center;">Translation</p>
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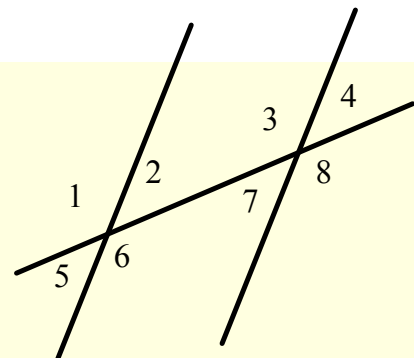
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Warm Up:

1. In the diagram at the right, name one pair of adjacent angles.

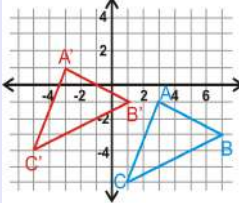
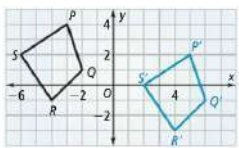
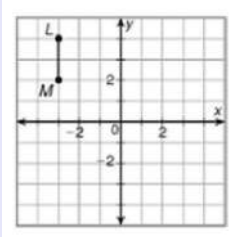




2. Name a pair of corresponding angles
 alternate exterior angles
 same side interior angles
 linear pair
 alternate interior angles
 vertical angles



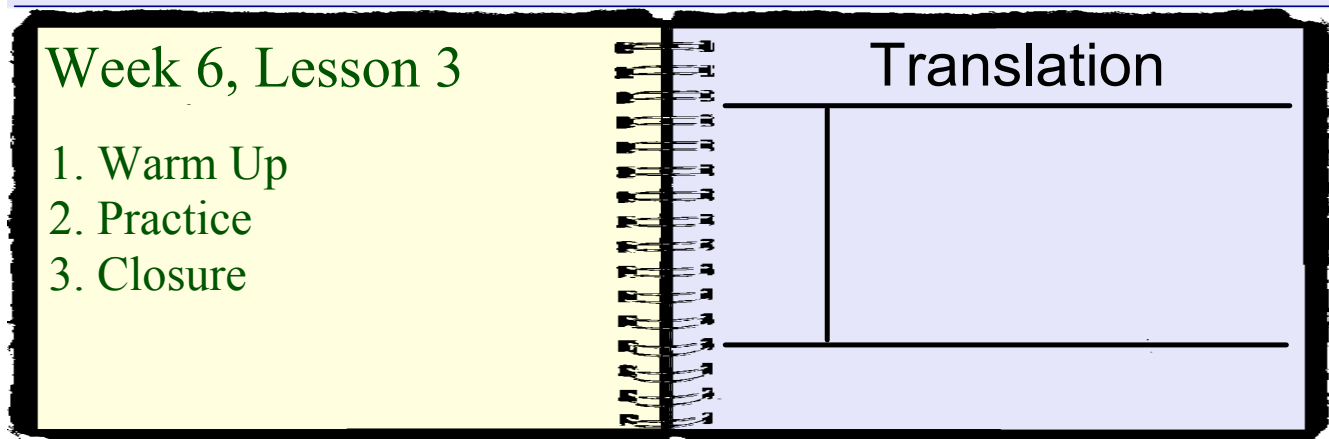
Which pairs are equal? Which pairs are supplementary?

3. Find the endpoint of a segment that has a midpoint of (3, -6) and an endpoint of (-1, -4)

<p><u>Transformation</u></p>	<p>- a change in the position, shape, or size of a figure</p> <p>- <u>pre-image</u>: the original figure</p> <p>- <u>image</u>: the transformed figure (uses prime notation ')</p> 
<p>Translation</p>	<p>- a change in an object's position left/right and up/down</p> <p>- it preserves the object's shape and size</p>
<p>Writing a rule to describe a translation</p>	<p>1. description in words</p> <p>ex: ___ units left/right and ___ units up/down</p> <p>2. coordinate notation</p> <p>ex: $(x,y) \rightarrow (x \text{ ____}, y \text{ ____})$</p>
<p>What is a rule that describes the translation that maps PQRS onto P'Q'R'S'?</p>	
<p>Rigid motion</p>	<p>What are the coordinates of L' and M' after a translation using the rule $(x,y) \rightarrow (x+4, y-5)$?</p>  <p>Example</p> <p>These tiles are all <i>congruent</i> → rigid motion</p>  <p>None of these tiles are <i>congruent</i> → NOT rigid motion</p>  <p>Summary:</p>

EQ: G.CO.2 How do I graph translations?

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Warm Up:

1. What is the image of point A (-4,6) after being translated according to the following coordinate rule?

$$(x,y) \longrightarrow (x+4, y-3)$$

2. Describe this transformation in words.

3. Given points A(3,-7) and B(-1, 5), What is the the:

- a. Midpoint
- b. Slope
- c. Distance

Name _____

G.CO.2 Practice

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1. $\triangle ABC$ is located at $A(3, -2)$, $B(5, -3)$ and $C(4, -7)$.
This pre-image is mapped to $\triangle A'B'C'$ under the translation $(x, y) \rightarrow (x + 1, y - 3)$.

Part A: Graph pre-image $\triangle ABC$ and image $\triangle A'B'C'$ on the grid shown.

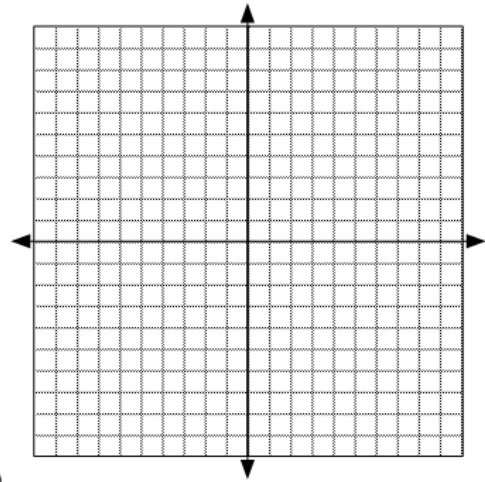
Part B: Describe the translation using words.

2. $\triangle BAT$ is located at $B(4, -2)$, $A(10, -3)$ and $T(7, 4)$. It is then translated to $\triangle B'A'T'$ using the transformation $(x, y) \rightarrow (x + 2, y + 4)$.

Part A: **Without graphing**, identify the coordinates of B' , A' , and T' .

B' _____ A' _____ T' _____

Part B: Describe the transformation in words.

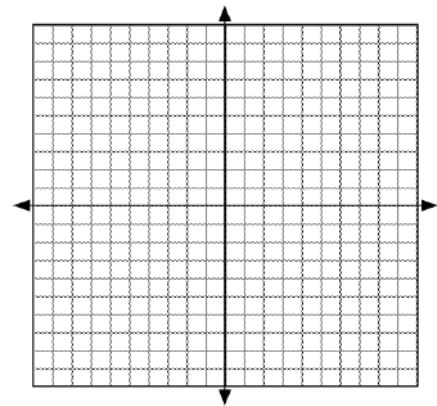


3. Pre-image $\triangle TOM$ mapped to image $\triangle T'O'M'$ such that $T(6, 5)$, $O(4, 9)$, $M(0, 3)$, and $T'(-1, 6)$, $O'(-3, 10)$ and $M'(-7, 4)$.

Part A: Graph the image and preimage on the grid shown.

Part B: Describe the rule of this transformation in words.

Part C: Describe the rule of this transformation in coordinate notation.



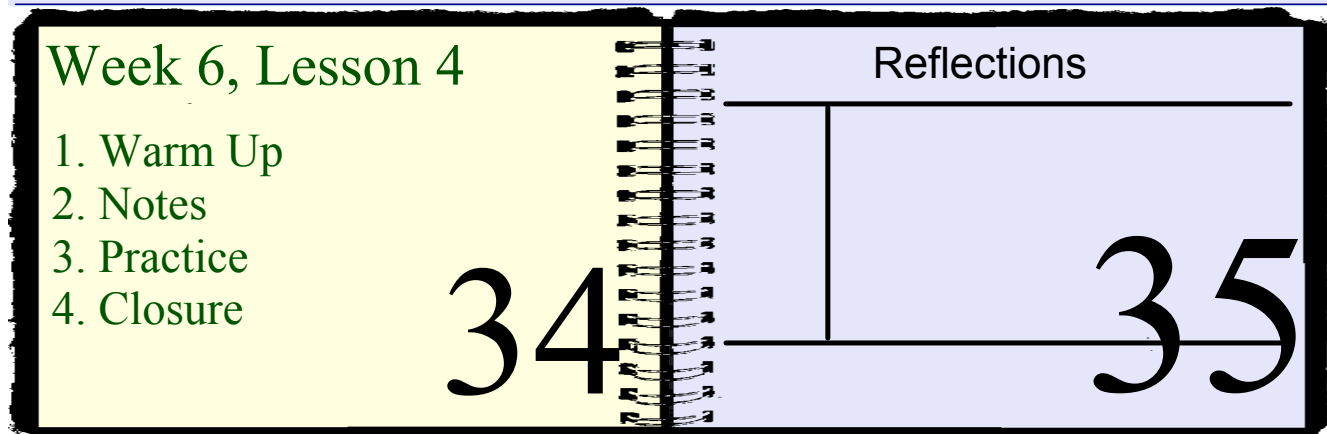
4. After a translation the image of point $C(-2, 3)$ is $C'(0, 2)$.

Part A: What is the coordinate rule for this transformation? _____

Part B: Identify the image of point $O(5, -3)$ after this same translation. _____

EQ: G.CO.2 How do I graph reflections?

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Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

Warm Up:

1. Point A of $\triangle AGT$ is $(5,3)$.

(a) Without graphing, what is the image of A after using the transformation $(x,y) \rightarrow (x - 4, y - 6)$?

(b) Explain how you determined the solution to part (a).

2. Given the line $2x-4y = 10$, What is the:

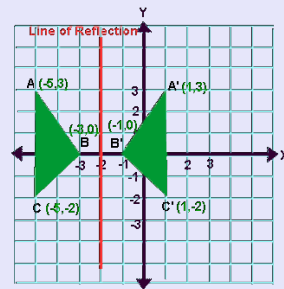
- Slope of this line
- Slope of a parallel Line
- Slope of a perpendicular line

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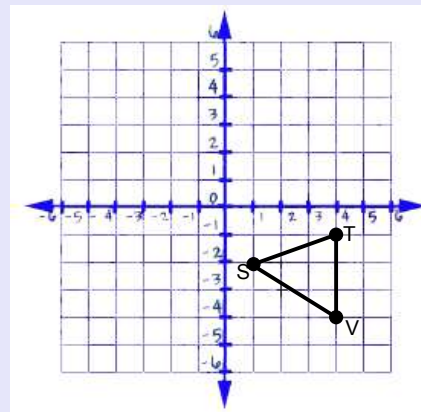
Reflections

a rigid motion that moves points by flipping them over a line called the *line of reflection*



Reflection notation

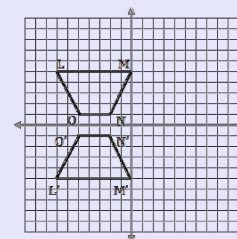
Ex: $R_{y=-1} \triangle STV$



Ex: $R_{x=0} \triangle STV$

Properties of Reflections

1. They preserve distance
2. They preserve angle measure
3. So, reflections are a rigid motion



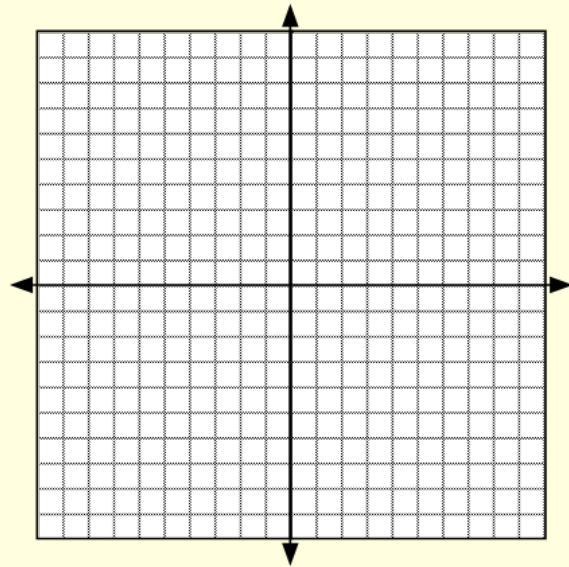
Summary:

Left-Side Practice

1. Given triangle ABC with points at A(2,2), B(-1,3), and C(1,5).

(a) Graph the pre-image.

(b) Graph the triangle after a reflection over the line $x = -1$.

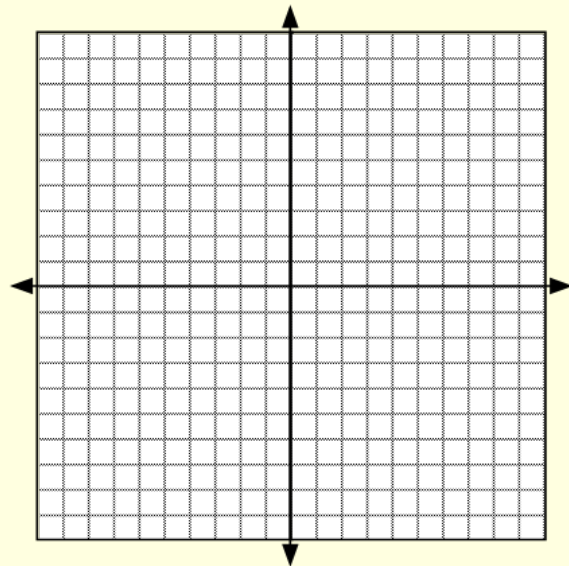


2. Given triangle XYZ with points at X(1,0), Y(0,-4), and Z(-4,1).

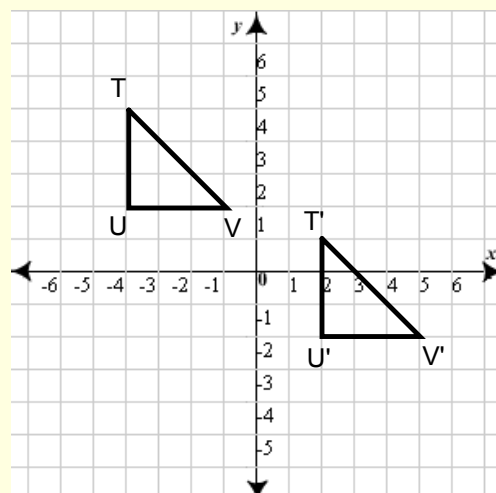
(a) Graph the pre-image.

(b) Graph the triangle after the following transformation:

$$R_{y=3}$$



3. Given the diagram shown, write the coordinate rule for this transformation.



EQ: G.CO.2 How do I graph reflections?

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<p>Week 6, Lesson 5</p> <ol style="list-style-type: none"> 1. Warm Up 2. Practice 3. Closure 	<p style="text-align: center;">Reflections</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div>
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Warm Up:

Given point A at (-1,2). Where will the image of point A be after reflecting over the line $y = -2$?

Given A (3, -8) and A'(7, -1) what is the coordinate rule if A is mapped onto A'.

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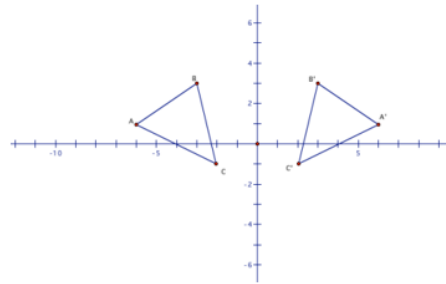
Name _____

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1. Given the picture at the right.

Part A: What line did the triangle reflect over?

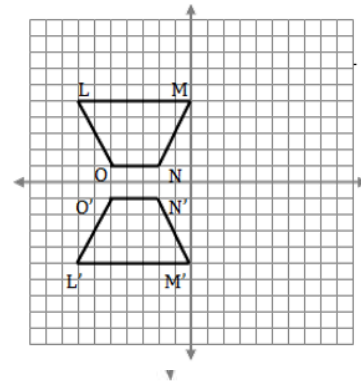
Part B: What would the coordinates be of A' , B' and C' if you were reflecting over the line $x = 1$ instead of the line from part A?



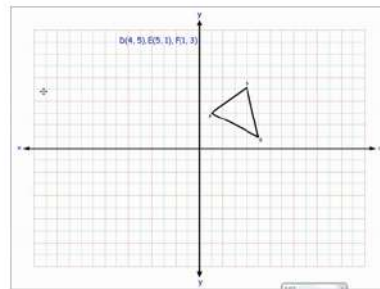
2. Given the diagram at the right.

Part A: What line did the shape reflect over?

Part B: What would the coordinates be of L' , M' , N' and O' if you were reflecting over the line $y = 2$ instead of the line from part A?



3. Given the triangle shown above, reflect it over the line $y = -1$ to get $\triangle D'E'F'$. List the new coordinates.



4.

A quadrilateral with vertices $(-3, 3)$, $(-3, 0)$, $(3, 0)$, and $(3, 3)$ is reflected across the y -axis. Which is not a vertex of the image?

- A. $(-3, 3)$
- B. $(-3, 0)$
- C. $(3, 0)$
- D. None of the above

5.

Which of the following capital letters is a reflection image of itself across a horizontal line?

- A. M
- B. N
- C. O
- D. P

6. For the figure shown at the right,

(a) What is the relationship between $\angle XAY$ and $\angle ZAY$?

(b) If \overline{AY} bisects $\angle XAZ$, find the value of x .

(c) Find the measure of $\angle XAZ$.

