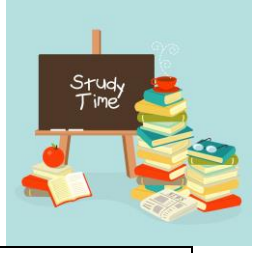


Geometry Reflective Portfolio

Unit #2: Transformations

Section #1: Vocabulary (words and/or labeled diagrams)

Transformation	**Rigid Motions**	**Line symmetry**
Point symmetry	**Reflection**	**Rotation**
Translation	**Image**	**Pre-image**
Orientation	**Isometry** • **Direct** • **Opposite**	
Composition	**Invariant**	**Vector(translation vector)**

Section #2: Formulas/Equations/Theorems

- **Re-write the transformation rule sheet I gave you in class.**

Transformation	Isometry
Line Reflections	**opposite**
Reflection in the ***x*-axis:**	
Reflection in the ***y*-axis:**	
Reflection in ***y* = *x*:**	
Reflection in ***y* = -*x*:**	
Rotations	**direct**
Rotation of **90º:** **Positive angles go counterclockwise**	
Rotation of **180º:** ***(same as reflection in the origin)***	
Rotation of **270º:**	
Translations	**direct**
$T_{(a,b)}$ =	

- **Write the composition that does a reflection <u>over the y-axis first then a rotation of 90º</u> using both types of notation.**

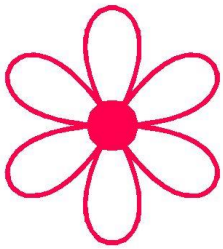
  circle: _____ ∘ _____ (A) Function: uses parenthesis:(_____(_____))(A)

- **Write out the theorem for reflection over a pair of parallel lines.**

- **Write out the theorem for reflection over a pair of intersecting lines.**

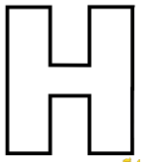
<u>Section #3: Key methods and concepts (write out the process and/or a solved example)</u>

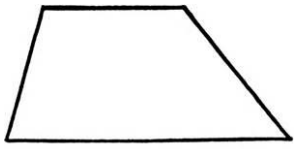
- **Show <u>all the lines of symmetry</u> for each or write none.**



- **Compare and Contrast the point symmetry for each:**

- **Name the order and rotational symmetry for each:**





- **a) order____ degrees:_____**
  b) order____ degrees:_____
  c) order____ degrees:_____
  d) order____ degrees:_____

- **Explain <u>positive</u> degrees of rotation and <u>negative</u> degrees of rotation. (ex. R_{90^o} vs. R_{-90^o})**

- **The line of reflection is the _____ of the segment connecting the corresponding points between pre-image and image.**

- **<u>CONSTRUCT</u> (using compass and straightedge) the line of reflection between the 2 given triangles.**