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| **Homework: Compositions and Single Transformations** |

**Part 1: Graph the pre-image and image on the graph below AND label the vertices. Then, write a description of the transformation given by the coordinates below. Finally, write an algebraic rule for the transformation**

1.  2. 

Description: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Description: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Algebraic Rule: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Algebraic Rule: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 2: Describe the transformations on the graph verbally and by writing an algebraic rule.   
Hint: The triangle with dotted lines is the preimage.**

**B’**



**A’**

**B**

**A**

**CA**

3. 4. 5.

**B**

**A**

**B**

**C’A**

**CA**

**B’**

**A**

**C’A**

**CA**

**B’**

**C’A**

**A’**

**A’**

Description: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Description: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Description: \_\_\_\_\_\_\_\_\_\_\_\_

Algebraic Rule: \_\_\_\_\_\_\_\_\_\_\_\_ Algebraic Rule: \_\_\_\_\_\_\_\_\_\_\_\_ Algebraic Rule: \_\_\_\_\_\_\_\_\_\_

**Part 3: Given the description, write an algebraic rule to represent the transformation. Then graph the pre-image and image on the graph below. Use with A(2,-2), B(3,1), and C(1,2).**

**A**

6) is rotated 180˚ then dilated  
 by a factor of 2 about the origin

Algebraic Rule: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) is reflected over y = -x and moved   
 up 2

Algebraic Rule: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_