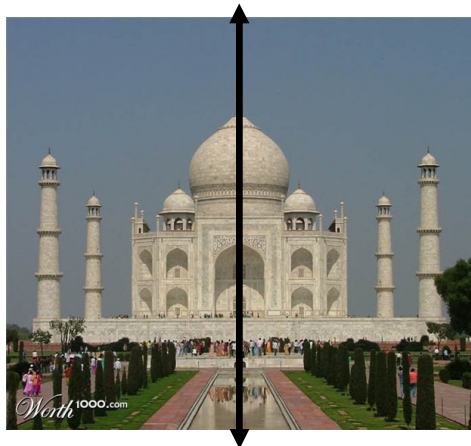
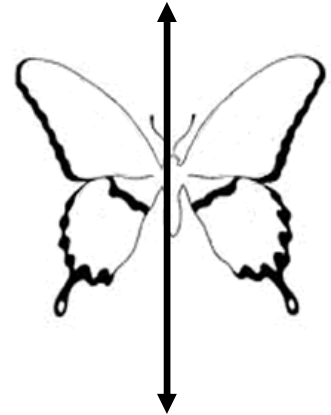
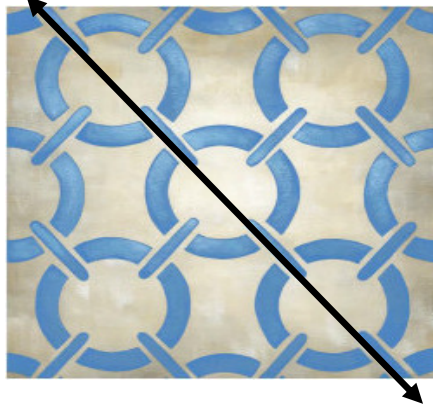
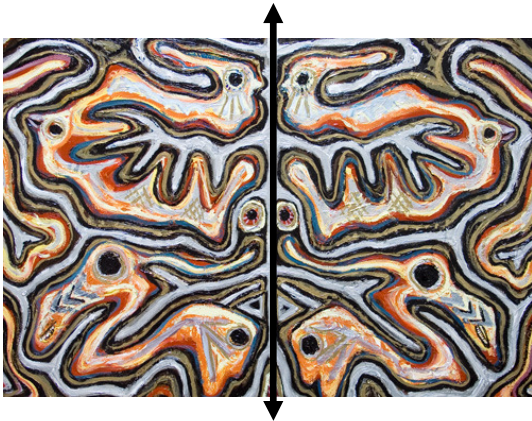


# Math 9: Line Symmetry and Points

Name: \_\_\_\_\_

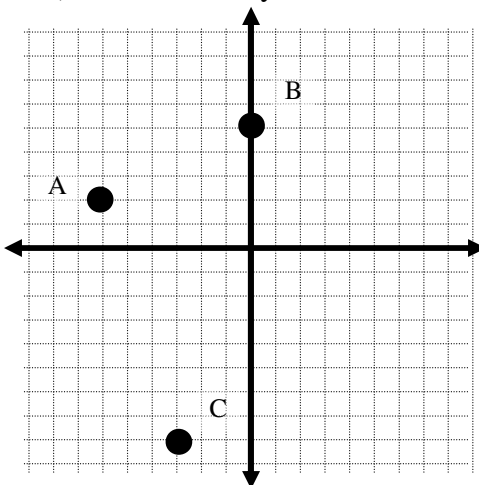
Date: \_\_\_\_\_ Block: \_\_\_\_\_

Line symmetry is when you have a mirror image across a line many things around us, in art, nature, architecture. Symmetry is an important part of mathematics as it allows us to



1. Draw the equations of a line on the graph. Use the coordinates given then find the mirror point on the other side of your line and state the coordinates. Use this line as the line of symmetry as your reflection line and write down the coordinates of the reflected points.

a) Mirror line:  $y = x$

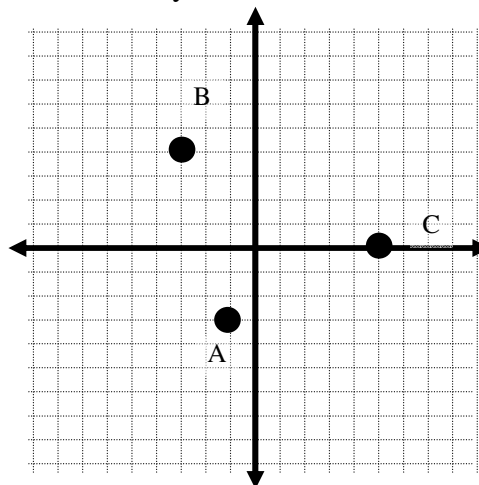


x	y

Reflected coordinates:  $A'(\text{ \_\_\_\_ }, \text{ \_\_\_\_ })$

$B'(\text{ \_\_\_\_ }, \text{ \_\_\_\_ })$   $C'(\text{ \_\_\_\_ }, \text{ \_\_\_\_ })$

b) Mirror line :  $y = -x + 1$



x	y

Reflected coordinates:  $A'(\text{ \_\_\_\_ }, \text{ \_\_\_\_ })$

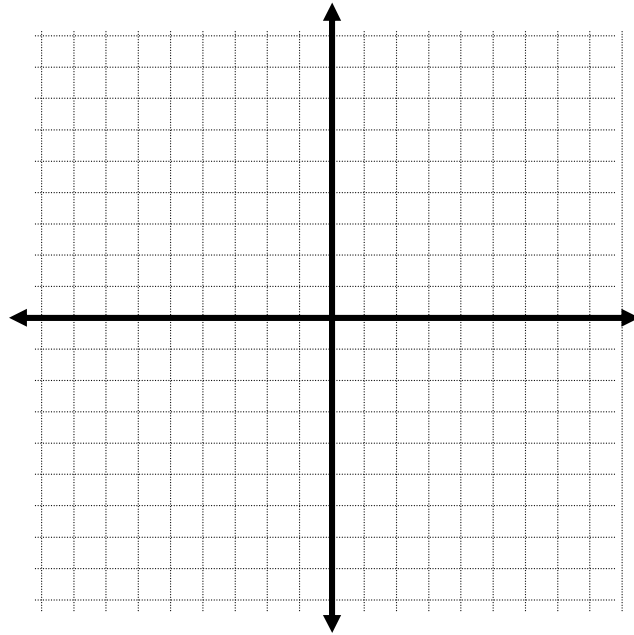
$B'(\text{ \_\_\_\_ }, \text{ \_\_\_\_ })$   $C'(\text{ \_\_\_\_ }, \text{ \_\_\_\_ })$

2. In question 1(a), do you notice some pattern with the coordinates of the reflected points? Describe the relationship.

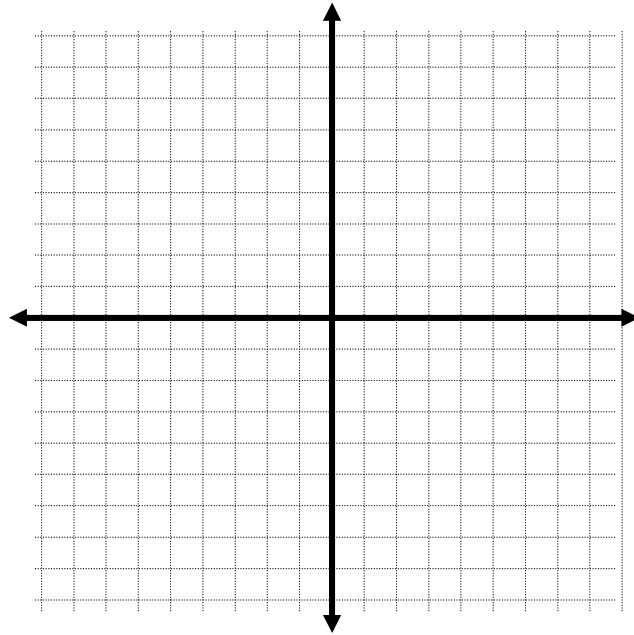
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3. Draw the mirror lines given the equations and plot the points given. Find the mirrored coordinates

a) Mirror:  $y = 2x$   
A(1, -4) and B(2, 2)



b) Mirror:  $y = -2x + 1$   
A(-3, -3) and B(-1, -4)



4. Draw in the mirror line  $y = x$  and reflect the diagram across the line

