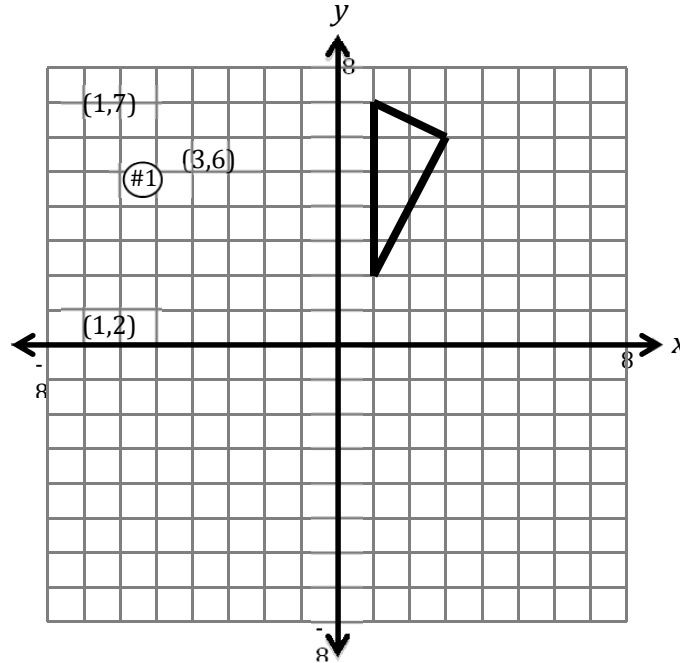


Investigating Transformations Using Coordinates

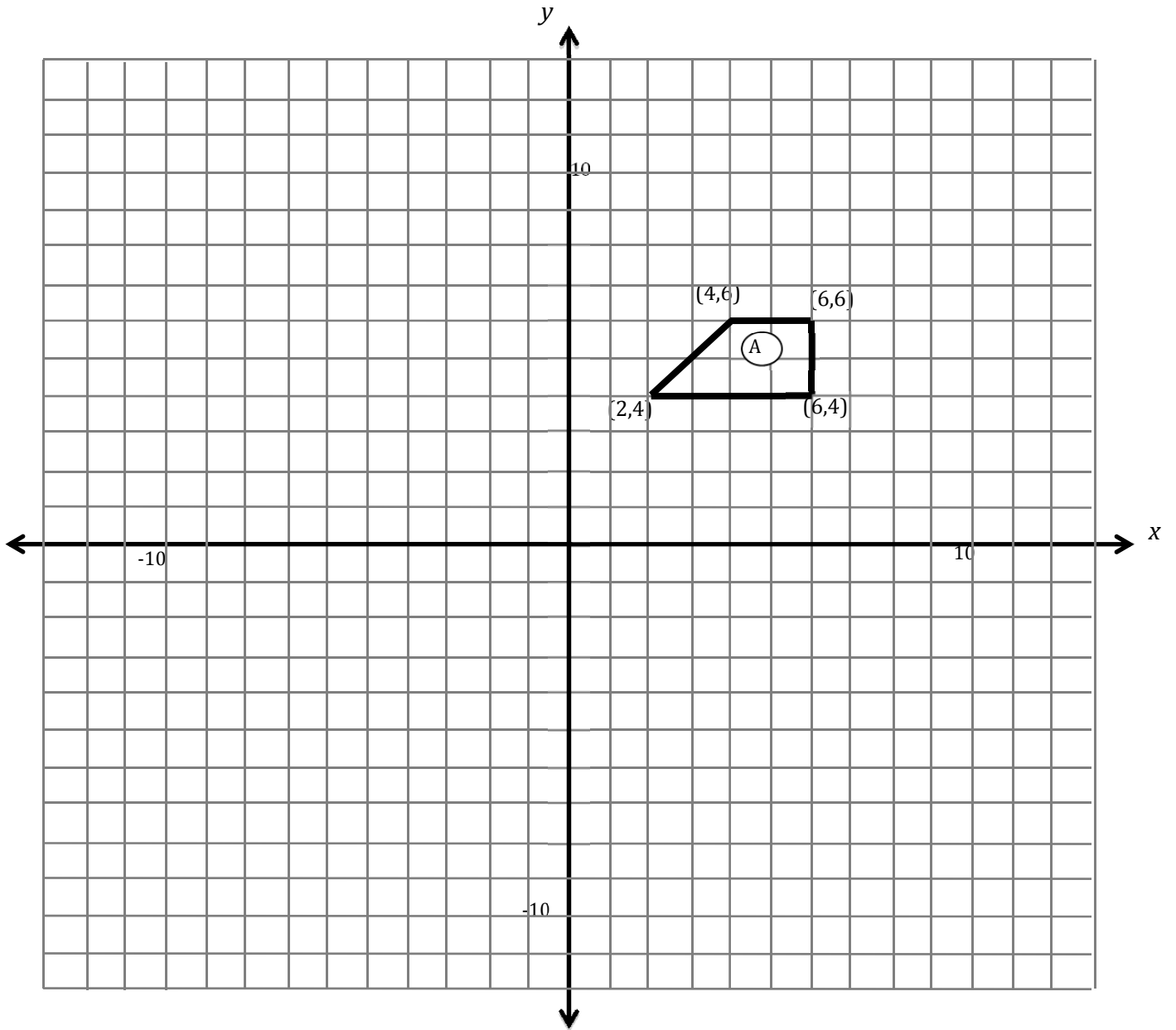
Title: _____



| Coordinates of Original Figure | Explanation of Transformation | Coordinates of Image | Some Observations |
|---|-------------------------------|---|-------------------|
| Figure # ____ (____, ____) (____, ____) (____, ____) | | Figure # ____ (____, ____) (____, ____) (____, ____) | |
| Figure # ____ (____, ____) (____, ____) (____, ____) | | Figure # ____ (____, ____) (____, ____) (____, ____) | |
| Figure # ____ (____, ____) (____, ____) (____, ____) | | Figure # ____ (____, ____) (____, ____) (____, ____) | |

Additional Observations:

Investigating Dilations Using Coordinates (1)



Investigating Dilations Using Coordinates (2)

| Coordinates of Original Figure | Explanation of Transformation | Coordinates of Image | Some Observations |
|---|-------------------------------|---|-------------------|
| Figure # ____ (____, ____) (____, ____) (____, ____) (____, ____) | | Figure # ____ (____, ____) (____, ____) (____, ____) (____, ____) | |
| Figure # ____ (____, ____) (____, ____) (____, ____) (____, ____) | | Figure # ____ (____, ____) (____, ____) (____, ____) (____, ____) | |

1. Choose a vertex from the original figure and connect it to the corresponding vertices on figure B and figure C. Do this for another set of vertices. What do you observe?

2. How do the lengths of the sides and the areas of the shapes compare when the coordinates are multiplied by 2? Multiplied by 1/2? What do you predict would happen if the coordinates were multiplied by 3?

3. What happens if you multiply the coordinates by a negative number?

Extension: Draw another figure so that one of the vertices is the origin? Multiply the coordinates by a whole number greater than 1? Multiply the coordinates by a number between 0 and 1? How do the figures compare?

Name: _____ Date: _____ Period: _____

Transformations Using Coordinates Summary

| | |
|---------------------|--------------------|
| Translations | Reflections |
| Rotations | Dilations |