

# MA 109: October 3

Transformations: Summary and Review

## Start of Class

### Instructor Information

Name:

Email:

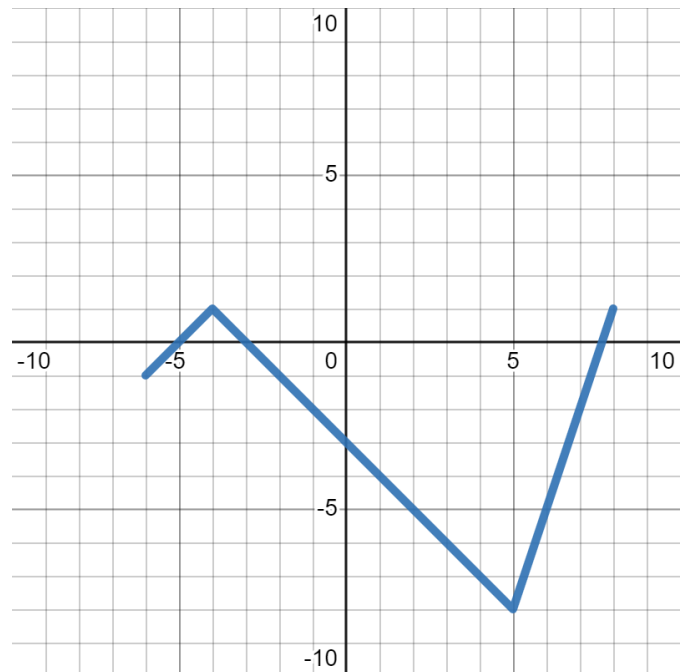
Office Hours:

## Warm-up Questions

## Notes

	Vertical Transformation	Horizontal Transformation
<b>Shift</b>	Shift up	Shift left
	Shift down	Shift right
<b>Scale</b>	Vertical stretch	Horizontal stretch
	Vertical compression	Horizontal compression
<b>Reflection</b>	Vertical reflection	Horizontal reflection

**Example:** Suppose  $f(x)$  is given in the graph to the right. Draw the graph of  $f(2x)+3$ .



**Example:** Suppose the domain of  $f(x)$  is  $(-5,1)$  and its range is  $(-2,7]$ . What are the domain and range of  $4f(-x)$ ?

## End of Class

Write a summary of what you learned today:

What questions do you have about the material from today?

What do you need to do between now and the next class meeting?