

Transformations with Technology – By the Sea

Name: _____

Date: _____

Purpose: Student will explore: 1) graphing transformations using technology (TI – 83 Plus) and 2) writing rules for transformations.

Window – defines view of calculator screen

Stat Plot – defines appearance of graph and source of data

Stat – Edit – input data lists

1) List the coordinates of the Original Figure (Millie) - list these in the order they will be connected

A	(,)		M	(,)		X	(,)		
B	(,)		N	(,)		Y	(,)		
C	(,)		O	(,)		Z	(,)		
D	(,)		P	(,)		AA	(,)		
E	(,)		Q	(,)		BB	(,)		
F	(,)		R	(,)		CC	(,)		
G	(,)		S	(,)		DD	(,)		
H	(,)		T	(,)		EE	(,)		
I	(,)		U	(,)		FF	(,)		
J	(,)		V	(,)		GG	(,)		
K	(,)		W	(,)		A	(,)		
L	(,)								

2) Input your coordinates into the calculator. Put x -values in L1 and y -values in L2.

- Check your graph.

3) Translation

- Where do you want Millie to go? _____
Write a rule in coordinate form that gives Millie directions to accomplish this move: _____
- In lists L3 and L4 input your rule into the calculator. (Reminder: Where are your x - and y -values stored?)
- Check your graph.
- List the coordinates of your image points B' (,), L' (,) and FF' (,).
- Did Millie end up where you intended to send her? Explain.

-
- In which quadrant is point B' located? _____

4) Reflection:

- Do you want to reflect Millie over the x - or y -axis? _____
Write a rule in coordinate form that gives Millie directions to accomplish this move: _____
- In lists L3 and L4 input your rule into the calculator. (Reminder: Where are your x - and y -values stored?)
- Check your graph.
- List the coordinates of your image points B' (,), L' (,) and FF' (,).
- Did Millie end up where you intended to send her? Explain.

-
- In which quadrant is point B' located? _____

Dilation (Enlargement):

- What scale factor do you plan to use to enlarge Millie? _____
Write a rule in coordinate form that gives Millie directions to accomplish this move: _____
 - In lists L3 and L4 input your rule into the calculator. (Reminder: Where are your x - and y -values stored?)
 - Check your graph.
 - List the coordinates of your image points B' (,), L' (,) and FF' (,).
 - Did Millie end up the size you intended for her to be? Explain.
-
-

- In which quadrant is point B' located? _____

Dilation (Reduction):

- What scale factor do you plan to use to reduce Millie? _____
Write a rule in coordinate form that gives Millie directions to accomplish this move: _____
 - In lists L3 and L4 input your rule into the calculator. (Reminder: Where are your x - and y -values stored?)
 - Check your graph.
 - List the coordinates of your image points B' (,), L' (,) and FF' (,).
 - Did Millie end up the size you intended for her to be? Explain.
-
-

- In which quadrant is point B' located? _____

Simultaneously Translate, Reflect and Dilate:

- Where do you intend to send Millie? _____
 - Which axis do you intend to reflect Millie over? _____
 - What size (state in terms of the scale factor) do you intend to make Millie?

 - Write one Rule in coordinate form that gives Millie the instructions to reflect, translate and dilate simultaneously. _____
 - In lists L3 and L4 input your rule into the calculator. (Reminder: Where are your x - and y -values stored?)
 - Check your graph.
 - List the coordinates of your image points B' (,), L' (,) and FF' (,).
 - Did Millie end up where you intended to send her? Explain.
-
-

- Did Millie end up the size you intended to send her? Explain.
-
-

- Did Millie end up the size you intended for her to be? Explain.
-
-

- In which quadrant is point B' located? _____

- Identify the part of your rule that generates:
 - The Translation: _____
 - The Reflection: _____
 - The Dilation: _____

Millie

