DRAWING WITH GRAPHS

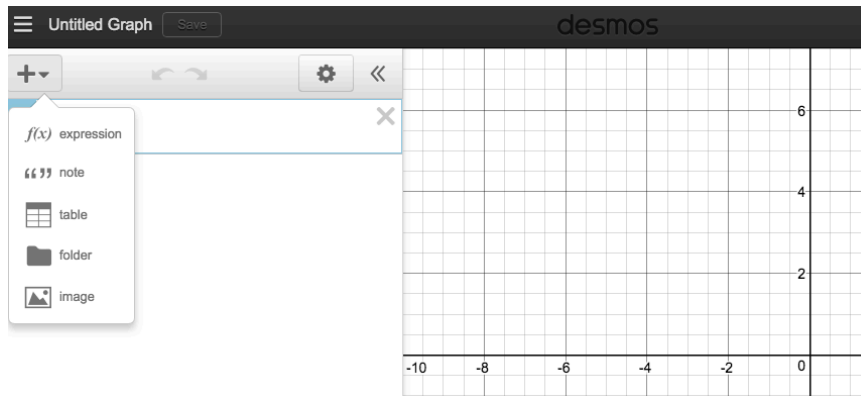**Name _____ PER_____ DATE_____**

Step 0: Create an account with desmos.com
          This will allow you to save your work and work on this project later.

Step 1: Pick an image to draw with graphs
          - Save image to the Photo Roll on the iPad
          - upload the image using the '+' button in the top right hand corner

Step 2: Write functions to create the outline of your image.
-          **Use the 'Family of Functions' sheet on the following page**
-          **Record your functions below**

-          **To create a segment of a graph, use { __ < x< ____}**

Step 3: COPY your image onto graph paper, complete with axes!
-          **Be as accurate as possible.**

Step 4: Answer the Reflection

Function 1: _____{ __ < x< ____}

Function 2: _____{ __ < x< ____}

Function 3: _____{ __ < x< ____}

Function 4: _____{ __ < x< ____}

Function 5: _____{ __ < x< ____}

Function 6: _____{ __ < x< ____}

Function 7: _____{ __ < x< ____}

If you need more lines, attach an extra sheet of paper.

RUBRIC

	4	**3**	**2**	**1**
Neatness and completeness	Drawing is complete and has no 'stray marks'	Drawing is complete w/ some 'stray marks'	Drawing is complete, but very messy	Drawing is incomplete
Mathematical Work	Functions used create an accurate copy of the image	Functions used create a mostly accurate copy of the image	There exists several gaps or missing details between the functions and the image	Functions listed do not completely copy image.
Reflection I	Explanation is thorough, with no grammatical errors	Explanation is thorough, with some grammatical errors	Explanation is thorough, but several grammatical errors	Explanation is vague

Reflection

In the space below, describe the type of functions used to create your image and where they can be seen.
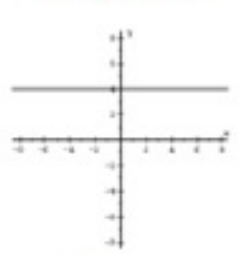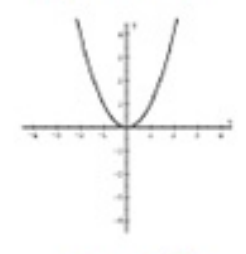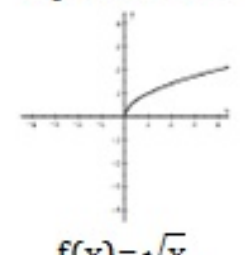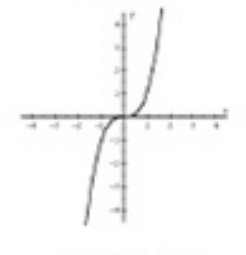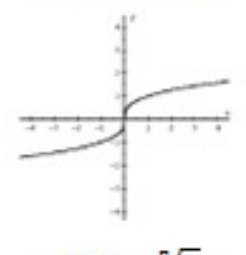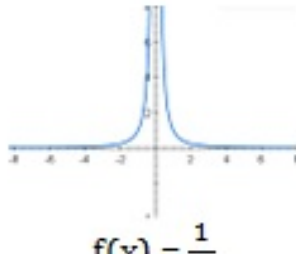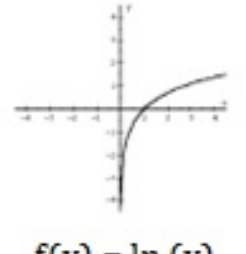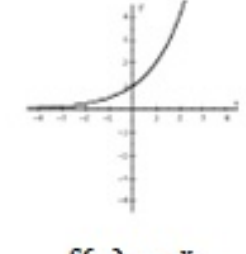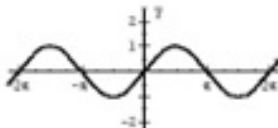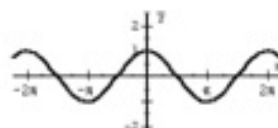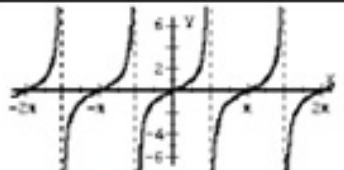
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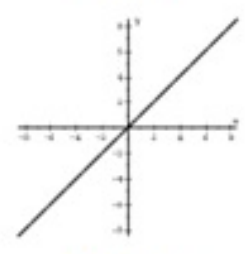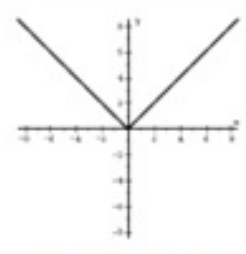
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Constant	Linear	Absolute Value	Quadratic
$f(x) = c$	$f(x) = x$	$f(x) = |x|$	$f(x) = x^2$

Square Root	Cubic	Cube Root	Reciprocal/Inverse/ Rational
$f(x) = \sqrt{x}$	$f(x) = x^3$	$f(x) = \sqrt[3]{x}$	$f(x) = \dfrac{1}{x}$

Rational	Logarithmic	Exponential	Greatest Integer (Step Function)
$f(x) = \dfrac{1}{x^2}$	$f(x) = \ln(x)$	$f(x) = e^x$	$f(x) = [[x]]$

Trigonometric Functions →			
	$f(x) = \sin(x)$	$f(x) = \cos(x)$	$f(x) = \tan(x)$