Northwest Florida State College

Exploring Graphical Transformations

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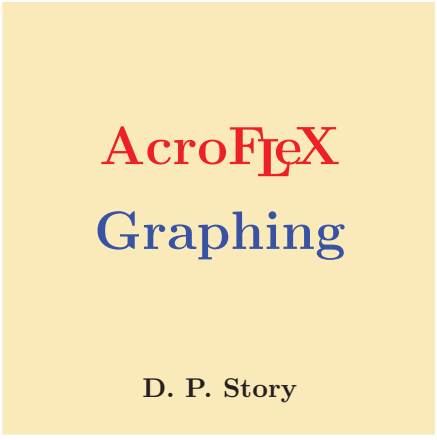
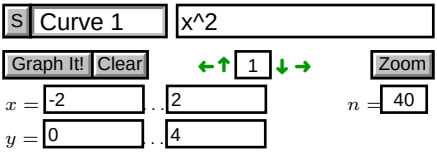
Transforming Graphs

This is a demo of graphical transformations, and is based on my recent work over the summer, 2008, on creating a interactive graphing system using a Flash application, written by myself, for PDF. Adobe Reader 9.0 or later is required to use this system.





Instructions: This graphing system can graph a function of x.

1. For a function of x, enter an algebraic expression to be graphed, e.g., `x^2`, `x^3`, `3x^2-1`, `|x|`, `sqrt(x)`
2. Set the graph viewing window: The range of the horizontal axis (x-axis) and range of the vertical axis (y-axis). For parametric plotting, set the range of the t variable.
3. Enter the number of points, n, to plot.
4. Click the Graph It! button.
5. Shift the viewing window horizontally or vertical; or zoom in or out.
6. Click `Clear` to clear the plot; use shift-click to deactivate the graphing screen.

Explore graphical transformations by entering numbers into the fields below. Put your mouse over the fields for additional instructions. Click on the green links to populate the graphing screen with suggested examples, then manipulate these examples using the controls below.

Description	Input	Suggested Examples
Vertical Shift		x, x^2, x^3, $(x-1)^2+1$
Horizontal Shift		$\sqrt{x}$, $\sqrt[3]{x}$, $\sqrt{x-1}+1$
Vertical Stretch/Shrink		$\lvert x\rvert$, $\lvert x-1\rvert$
Horizontal Stretch/Shrink		
Reflect w/resp y-axis	y-Axis	Click Clear before clicking on green links
Reflect w/resp x-axis	x-Axis	