TI-Nspire Activity: *Absolute Value Equations*
By: Pam Hammond

Activity Overview

Look the parent function of an absolute value equation and discover what happens when the function is changed. Discover what the parts of an absolute value equation means.

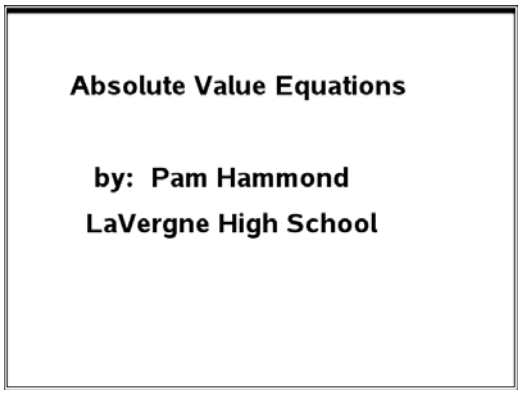
Concepts

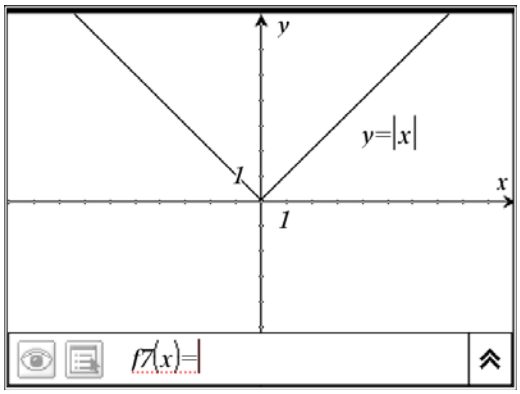
- *Exploring absolute value equations.*
- *Explore movement of the equation on the x-axis,*
- *Explore movement of the equation on the y-axis.*

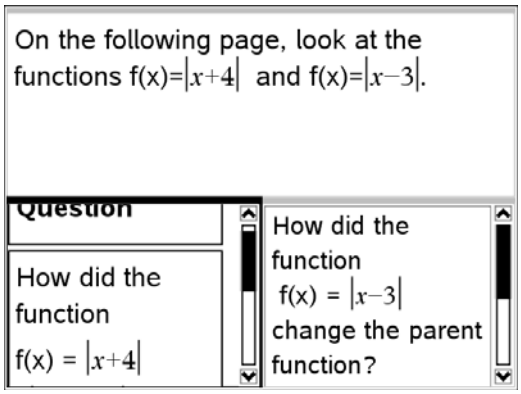
Teacher Preparation

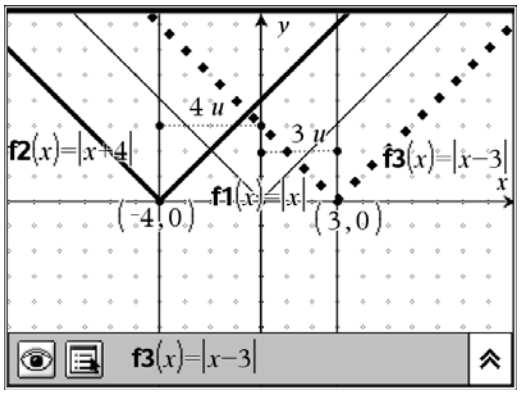
Download the .tns file Absolute Value Equations

Documents

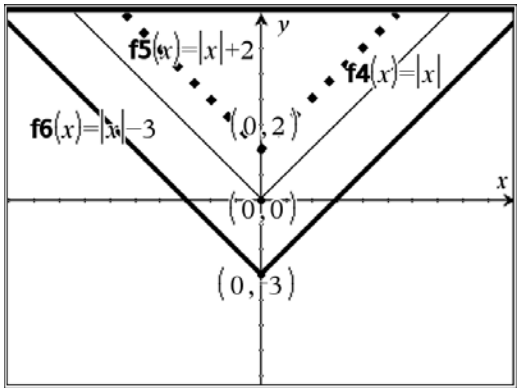








Look at the graphs on the following page to see what happens to the absolute value f(x) = $|x|$ when it changes to f(x) =$|x|+2$ and f(x) = $|x|-3$?



What happened when the equation moved from f(x)=$|x|$ to f(x)=$|x|+2$?

Student types answer here

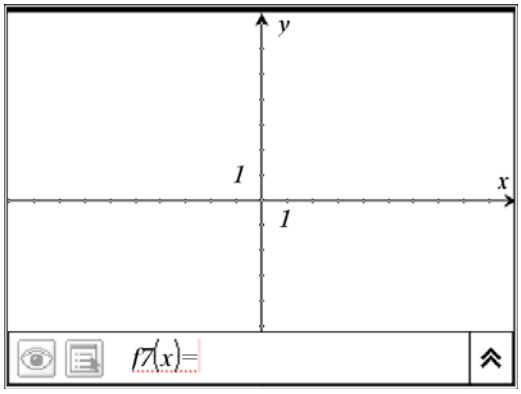
Question

What happened when the equation moved from f(x)=$|x|$ to f(x)=$|x|-3$?

What can you conclude about the equation f(x)=$|x+3|-5$?

Does the equation move up or down? Does the equation move right or left?

Graph the equation on the next page and see if you are correct.



Tell how the following equations will shift?(right or left, up or down) Then add a graph and geometry page and test your hypothesis.

1. f(x)=$|x|+7$
2. f(x)=$|x-6|-1$
3. f(x)=$|x+9|+4$
4. f(x)=$|x+2|-5$