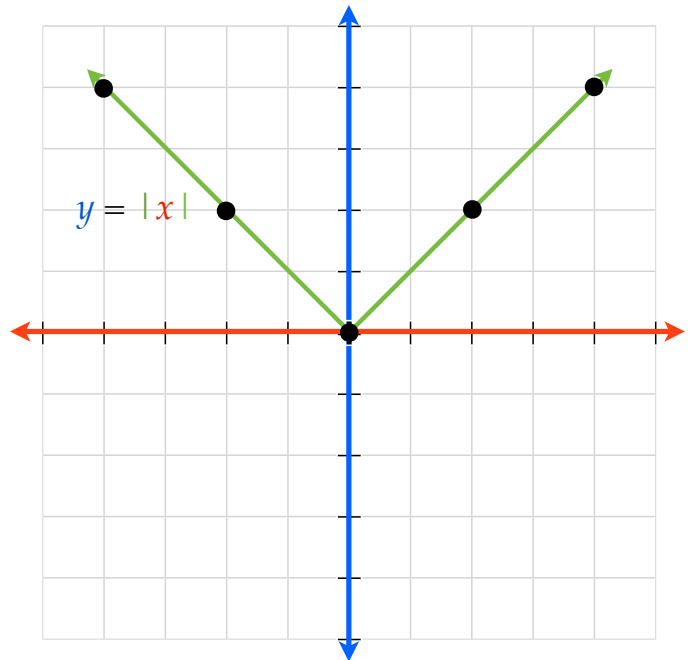


The Absolute Value Parent Function

$$y = |x|$$

x	y
-4	4
-2	2
0	0
2	2
4	4

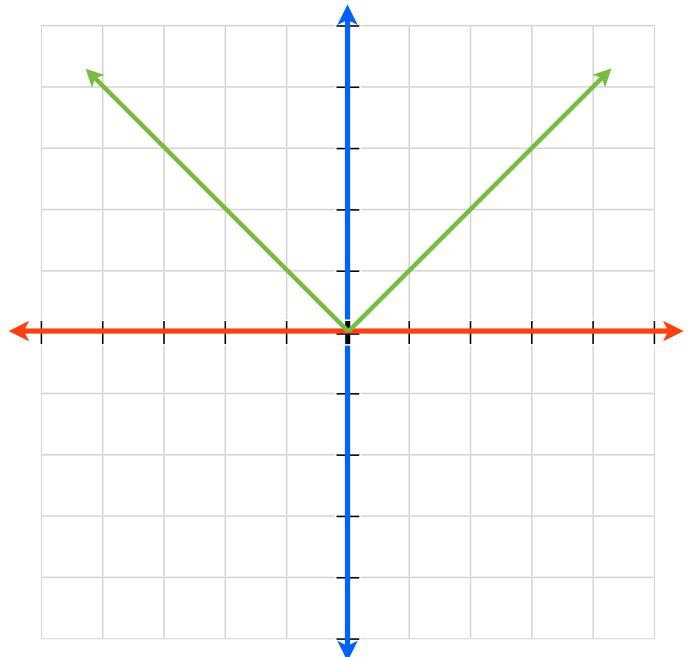


The Absolute Value Parent Function

$$y = |x|$$

The graph of $y = |x| + k$...
 causes a **vertical** translation of $y = |x|$
 if $k > 0$ if $k < 0$
 k units up k units down

$$y = |x| + 1$$

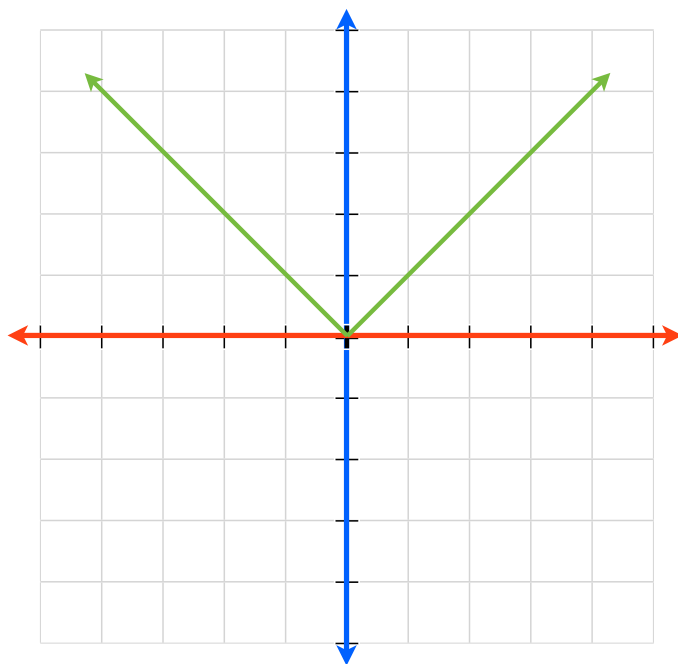


The Absolute Value Parent Function

$$y = |x|$$

The graph of $y = |x| + k$...
causes a **vertical** translation of $y = |x|$
if $k > 0$ if $k < 0$
 k units up k units down

$$y = |x| - 4$$

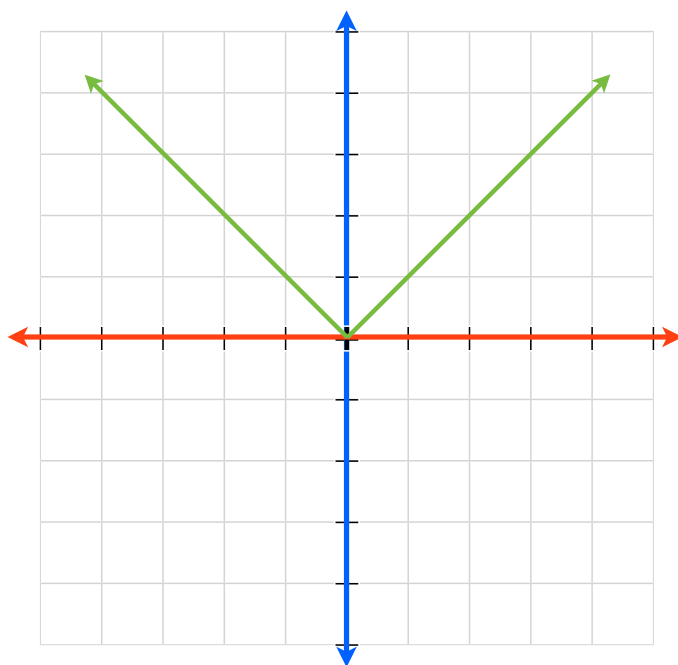


The Absolute Value Parent Function

$$y = |x|$$

The graph of $y = |x - h|$...
causes a **horizontal** translation of $y = |x|$
if $h > 0$ if $h < 0$
 h units right h units left

$$y = |x - 2|$$

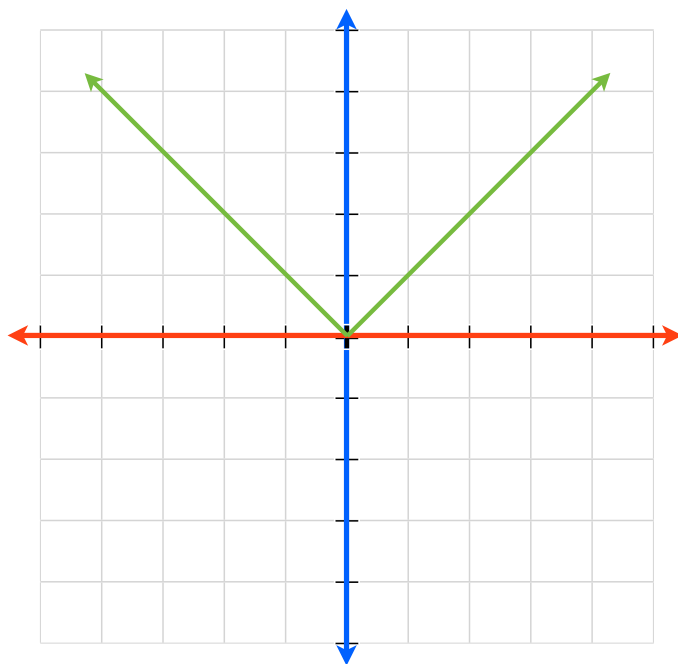


The Absolute Value Parent Function

$$y = |x|$$

The graph of $y = |x - h|$...
causes a horizontal translation of $y = |x|$
if $h > 0$ if $h < 0$
 h units right h units left

$$y = |x + 3|$$

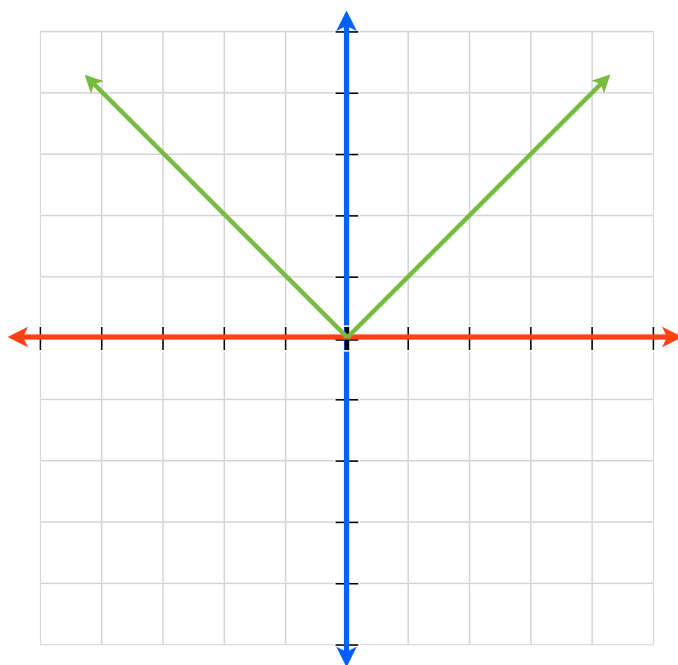


The Absolute Value Parent Function

$$y = |x|$$

The graph of $y = |x - h| + k$...
causes a horizontal and vertical translation
of $y = |x|$

$$y = |x - 3| + 1$$

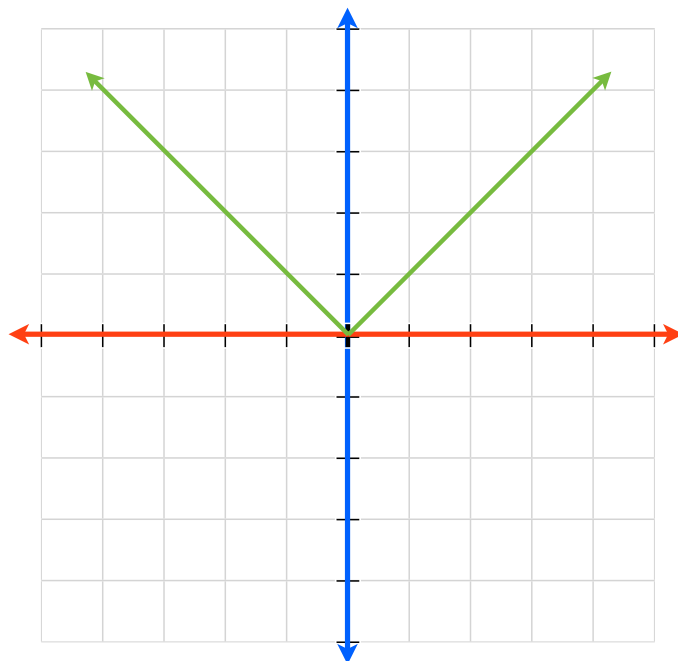


The Absolute Value Parent Function

$$y = |x|$$

The graph of $y = |x - h| + k$...
causes a **horizontal** and **vertical** translation
of $y = |x|$

$$y = |x + 1| - 3$$



$$y = |x - h| + k$$

Horizontal Translation

if $h > 0$ if $h < 0$
 h units right h units left

Vertical Translation

if $k > 0$ if $k < 0$
 k units up k units down

