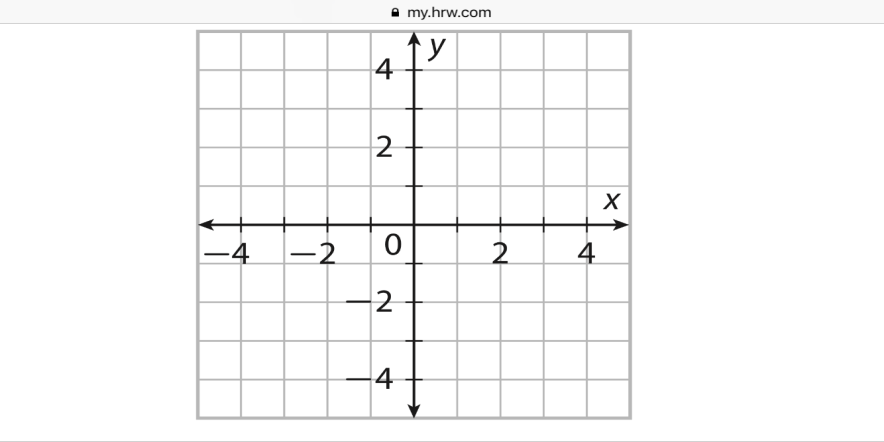
**Chapter 13: Piecewise-Defined Functions.**

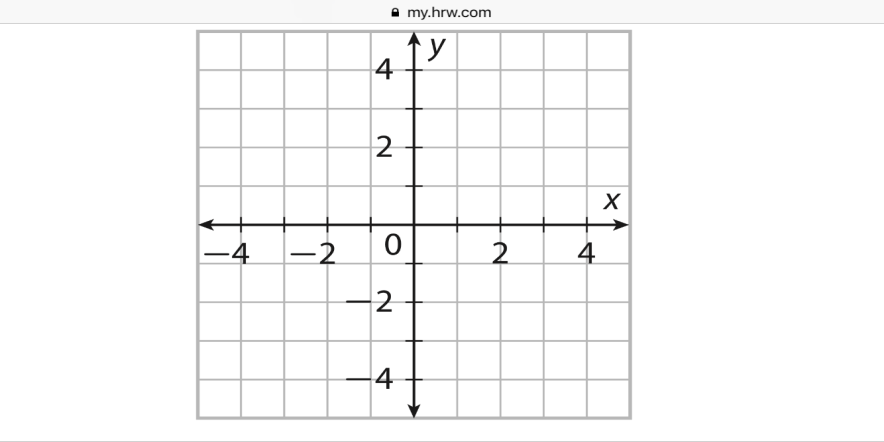
**Lesson 13.2: Absolute Value Functions and Transformations**

The most basic Absolute function is a piecewise function given by the following rule:

This function is called the parent absolute value function.

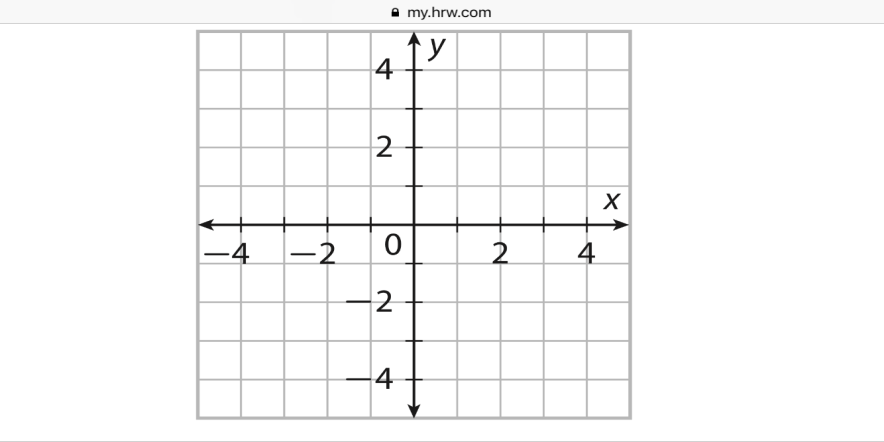


|  |  |
| --- | --- |
| *x* |  |
| -3 |  |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

**Example 1:**

|  |  |
| --- | --- |
| *x* |  |
| -3 |  |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

**Example 2:**



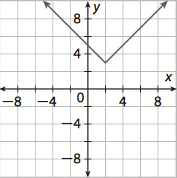
|  |  |
| --- | --- |
| *x* |  |
| -3 |  |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

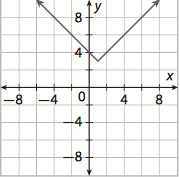
**Writing Equations based off Graphs of Absolute Value Functions.**

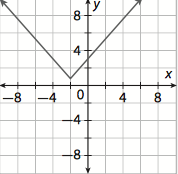
The general form of an absolute value function is as followed:

H is the number of units that the parent function is translated horizontally. (x-coordinate)

K is the number of units that the parent function is translated vertically. (y-coordinate)

**Example 1:**  **Example 2:**



**Example 3:**