

## Even and Odd Functions

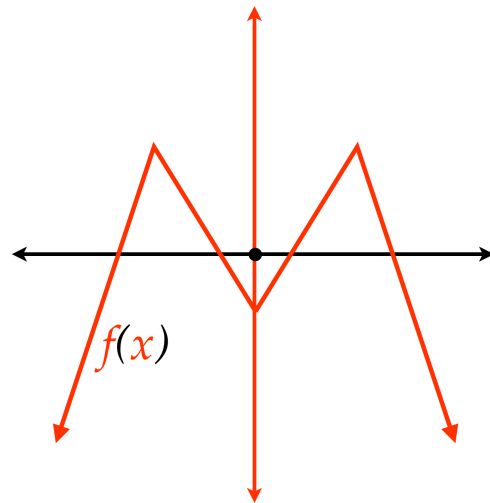
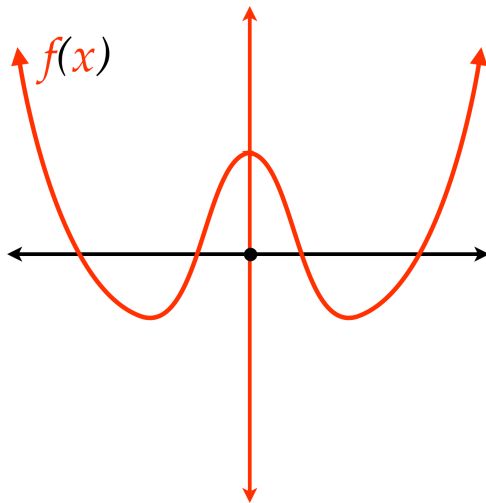
*Even* and *odd* are terms applied to functions to describe the symmetry that exists of the graph of the function.

### Even Functions

### Odd Functions

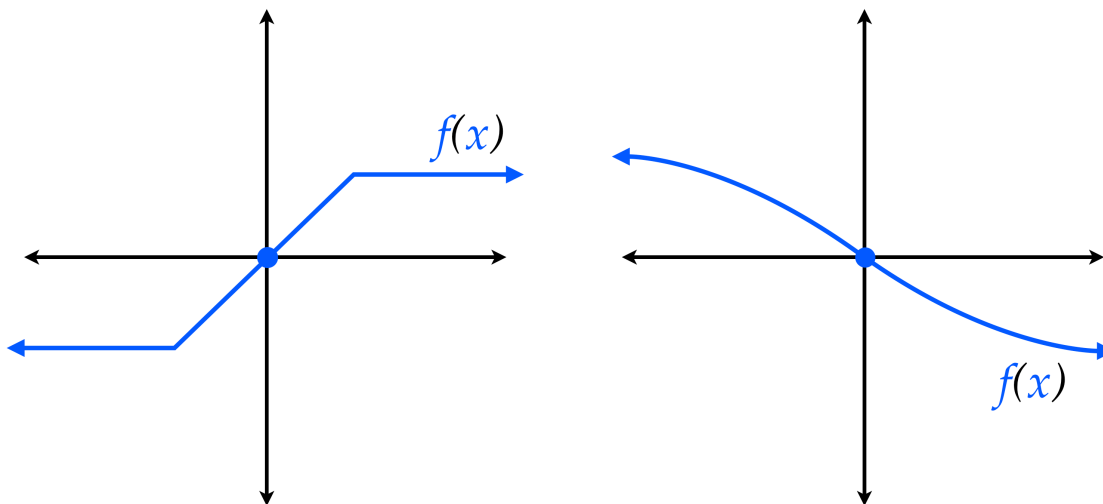
### Even Functions

symmetric with respect to the *y*-axis.



## Odd Functions

symmetric with respect to the origin.



## Popular Even Parent Functions

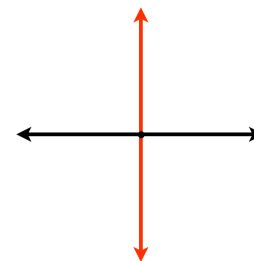
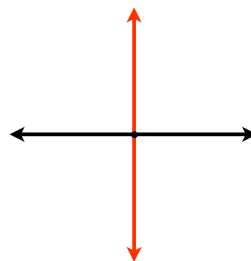
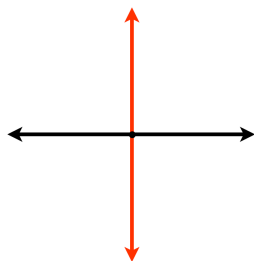
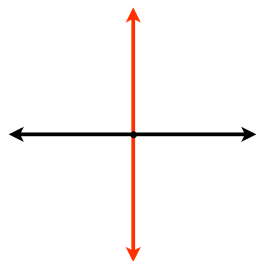
symmetric with respect to the  $y$ -axis.

Constant Function

Square Function

Absolute Value  
Function

Rational Function



# Popular **Odd** Parent Functions

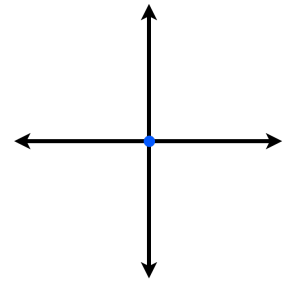
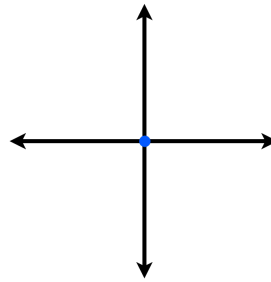
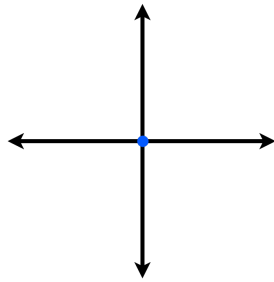
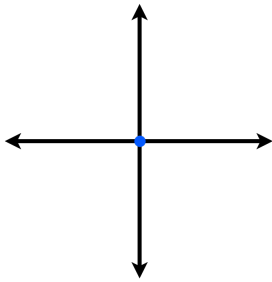
symmetric with respect to the **origin**.

Identify Function

Cube Function

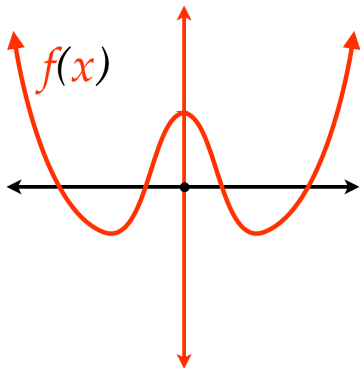
Cube Root  
Function

Rational Function



## **Even** Functions

A function is **Even** if and only if its graph is symmetric with respect to the **y-axis**.



## **Odd** Functions

A function is **Odd** if and only if its graph is symmetric with respect to the **origin**.

