

## Even vs. Odd Functions

*One of your many tasks in future mathematics courses will be to determine whether a function is even, odd or neither. This is very simple to do.*

*A function is even if  $f_{(-x)} = f_{(x)}$*

*This means if a (-x) is substituted into the problem, and no signs change, the function is even.*

*A function is odd if  $f_{(-x)} = -f_{(x)}$*

*In this case, a (-x) is substituted into the problem, and all signs change. If all signs change, this is an odd function.*

*If only some of the signs change, the function is neither even nor odd.*

*Even functions are symmetrical to the y axis.*

*Odd functions are symmetrical to the origin.*