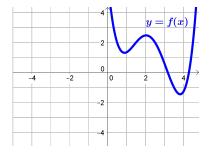
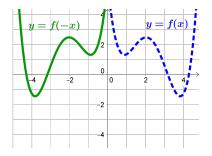
Like Even Functions we can understand Odd Functions algebraically

 Like Even Functions we can understand Odd Functions algebraically To do so, we will first look at how both reflecting across the x-axis and reflecting across the y-axis work together.

• Like Even Functions we can understand Odd Functions algebraically To do so, we will first look at how both • reflecting across the x-axis and • reflecting across the y-axis work together. We will start with the graph of a function y = f(x)

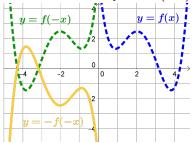


• Like Even Functions) we can understand Odd Functions algebraically To do so, we will first look at how both • reflecting across the x-axis and • reflecting across the y-axis work together. We will start with the graph of a function y = f(x)The graph of y = f(-x) is the graph of y = f(x) reflected across the y-axis



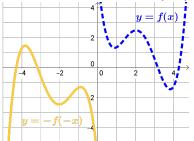
◆ Like Even Functions we can understand Odd Functions algebraically To do so, we will first look at how both ◆ reflecting across the x-axis and ◆ reflecting across the y-axis work together. We will start with the graph of a function y = f(x)The graph of y = f(-x) is the graph of y = f(x) reflected across the y-axis

If we now reflect y = f(-x) across the x-axis we get the negative of this function which is y = -f(-x)



• Like Even Functions we can understand Odd Functions algebraically To do so, we will first look at how both • reflecting across the x-axis and • reflecting across the y-axis work together. We will start with the graph of a function y = f(x)The graph of y = f(-x) is the graph of y = f(x) reflected across the y-axis

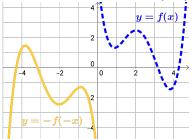
If we now reflect y = f(-x) across the x-axis we get the negative of this function which is y = -f(-x)



Notice: the graph of y = -f(-x) is the graph of y = f(x) rotated around the origin

• Like Even Functions we can understand Odd Functions algebraically To do so, we will first look at how both • reflecting across the x-axis and • reflecting across the y-axis work together. We will start with the graph of a function y = f(x)The graph of y = f(-x) is the graph of y = f(x) reflected across the y-axis

If we now reflect y = f(-x) across the x-axis we get the negative of this function which is y = -f(-x)

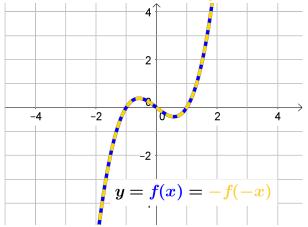


Notice: the graph of y = -f(-x) is the graph of y = f(x) rotated around the origin **Conclusion:** A function is *odd* if -f(-x) = f(x)

The graph of y = -f(-x) is the graph of y = f(x) rotated around the origin

The graph of y = -f(-x) is the graph of y = f(x) rotated around the origin

• We defined that a function y = f(x) is called *odd* if it remains the same when we rotate around the origin



The graph of y = -f(-x) is the graph of y = f(x) rotated around the origin

• We defined that a function y = f(x) is called *odd* if it remains the same when we rotate around the origin

