# Contents

GUI User Manual
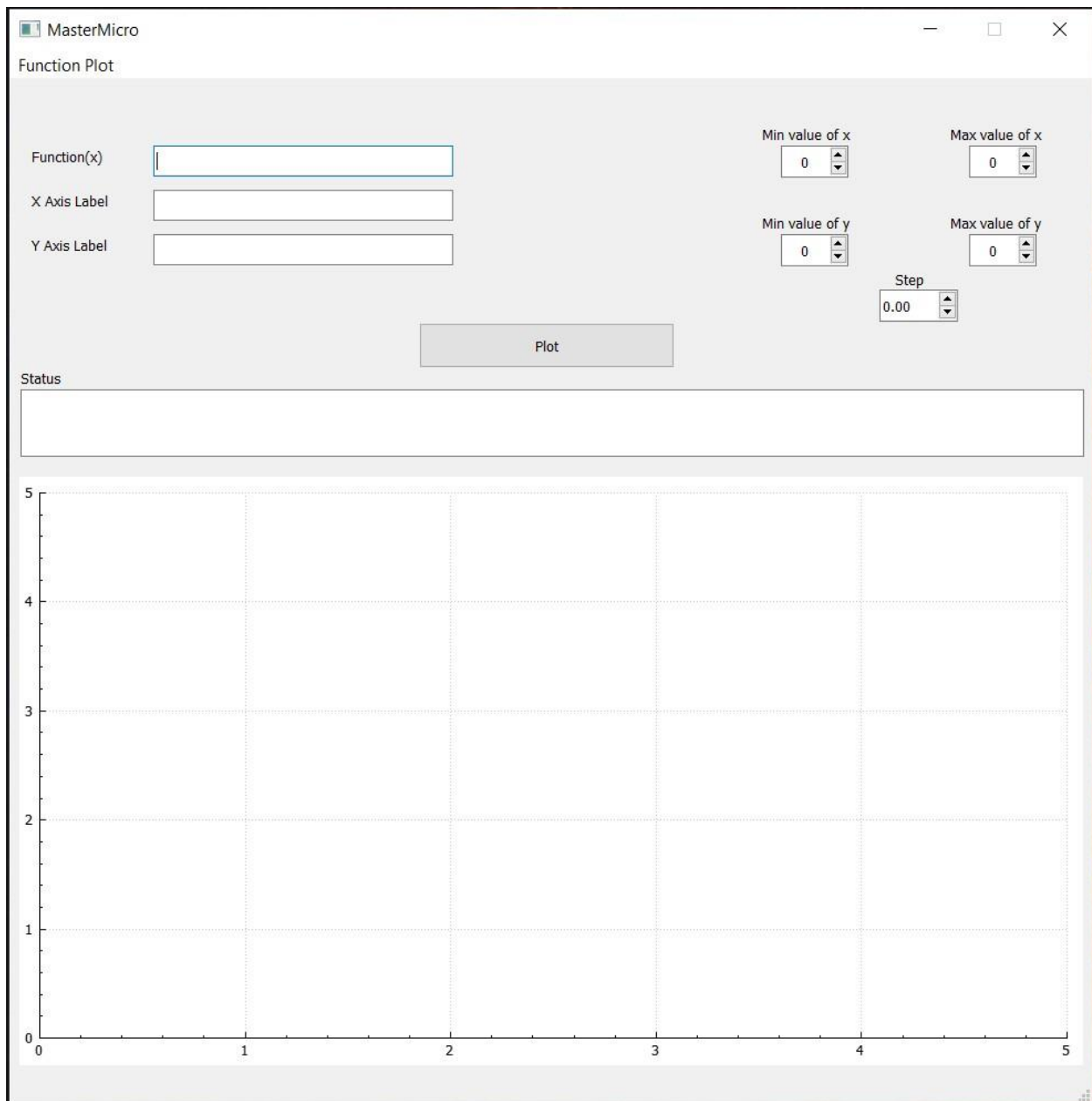
- **Function(x) text field** is the place where to insert the function of x be the user.
- **X label text field** is the place where to insert the label that appear on graph in the horizontal axis axis.
- **Y label text field** is the place where to insert the label that appear on graph in the vertical axis axis.
- **Min Value of x** is the place where to insert the minimum value of x on the graph.
- **Max Value of x** is the place where to insert the maximum value of x on the graph.
- **Min Value of y** is the place where to insert the minimum value of y on the graph.

- **Max Value of y** is the place where to insert the maximum value of y on the graph user.
- **Step** is the step of substitution in creating the graph data.
- **Plot** is the button to start plotting when it is pressed.
- **Status** shows the errors that may the user make or the equation if no errors.

Test Cases

Positive test cases
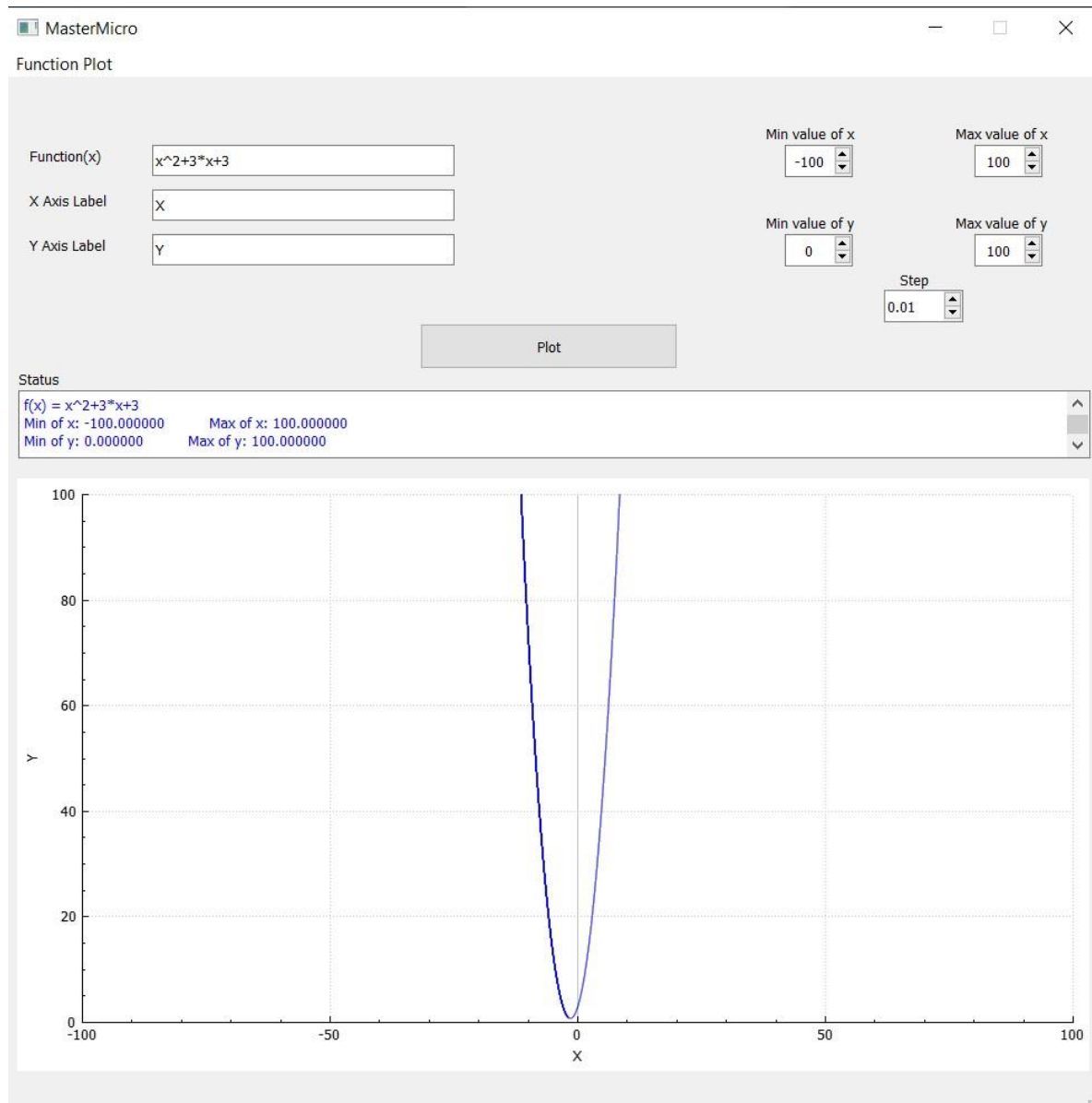
Function(x)   x^3-x+5

X Axis Label   X

Y Axis Label   Y

Min value of x   Max value of x
-10   ▲▼   10   ▲▼

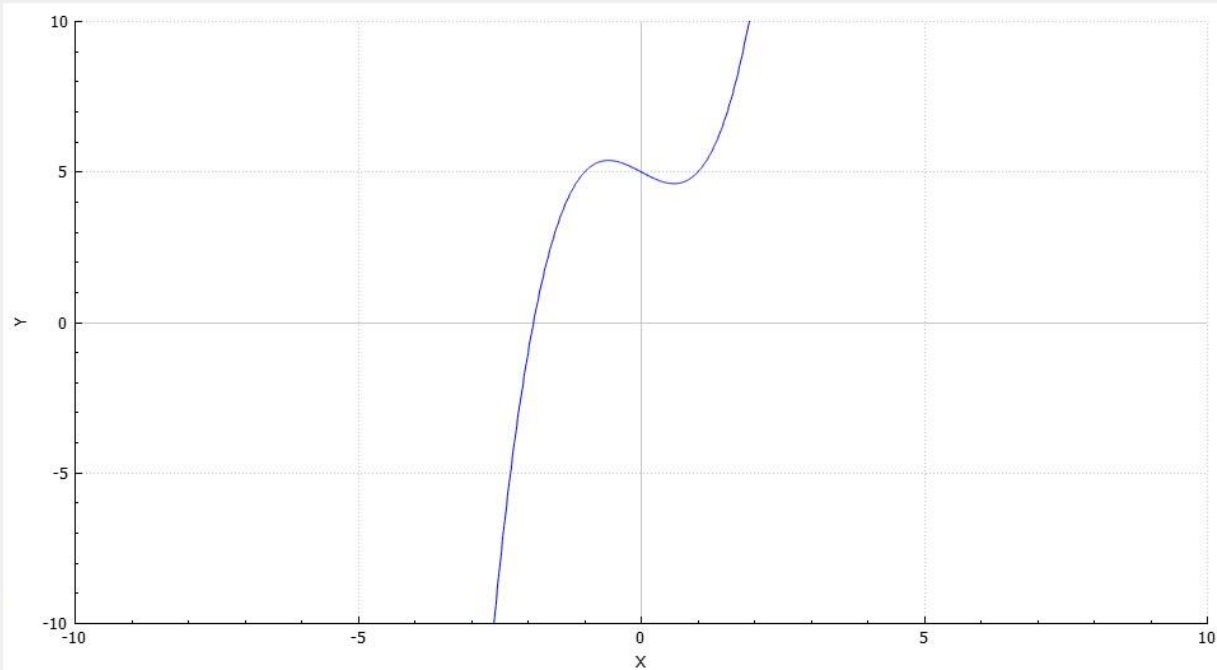Min value of y   Max value of y
-10   ▲▼   10   ▲▼

Step
0.01   ▲▼

Plot

Status

f(x) = x^3-x+5
Min of x: -10.000000   Max of x: 10.000000
Min of y: -10.000000   Max of y: 10.000000

MasterMicro ▣ — ☐ ✕

Function Plot

			Min value of x	Max value of x
Function(x)	1/x^2+3*x		-10	10
X Axis Label	X			
Y Axis Label	Y	Min value of y	Max value of y	
		-100	100	
		Step		
		0.01		

Plot

Status

f(x) = 1/x^2+3*x
Min of x: -10.000000   Max of x: 10.000000
Min of y: -100.000000   Max of y: 100.000000

MasterMicro — □ ✕

Function Plot

Function(x)   2^x

X Axis Label   X

Y Axis Label   Y

Min value of x   Max value of x
-10   10

Min value of y   Max value of y
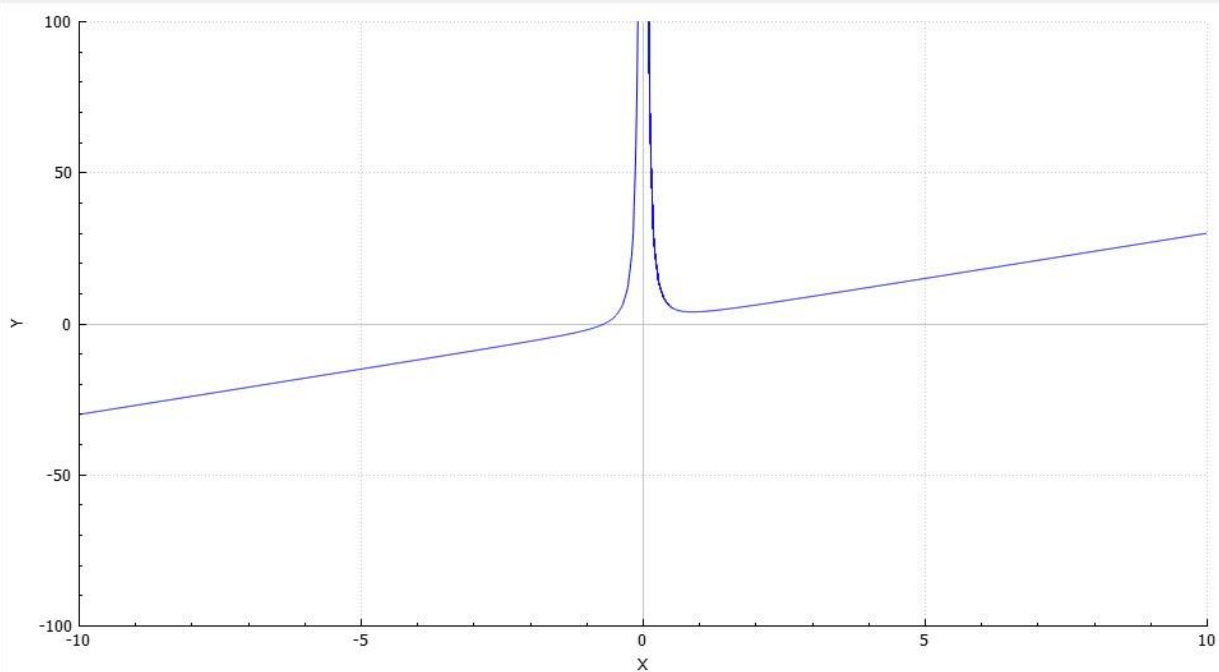-10   10
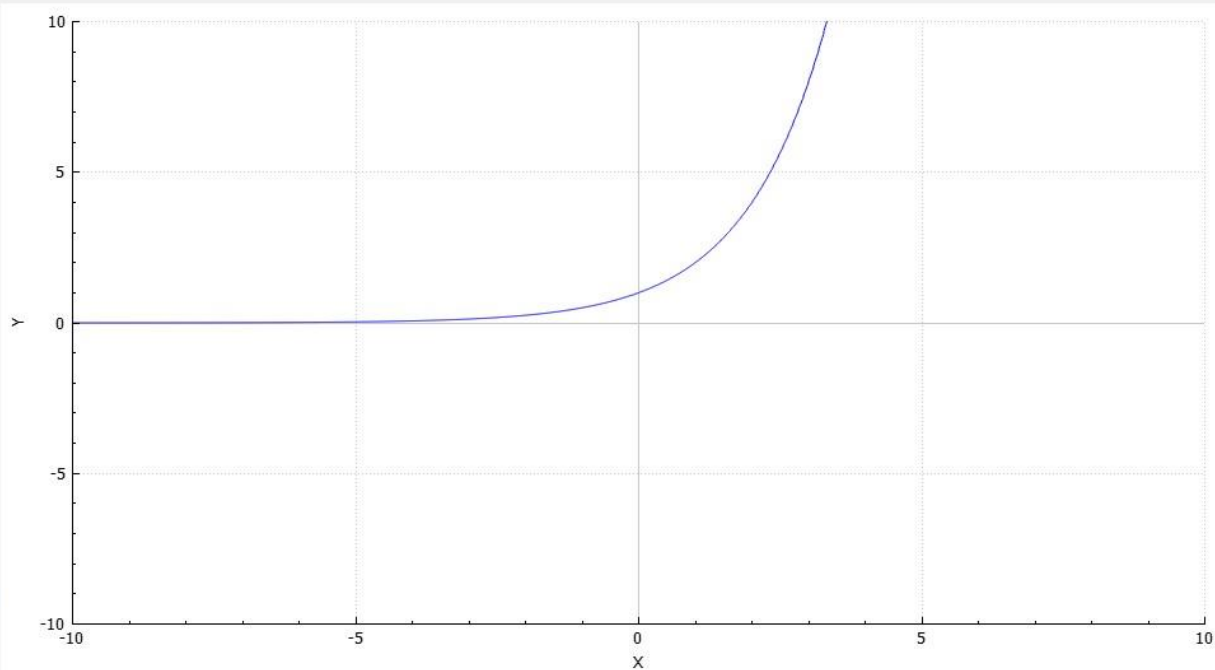
Step
0.01

Plot

Status

f(x) = 2^x
Min of x: -10.000000   Max of x: 10.000000
Min of y: -10.000000   Max of y: 10.000000

Negative Test Cases

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Function Plot

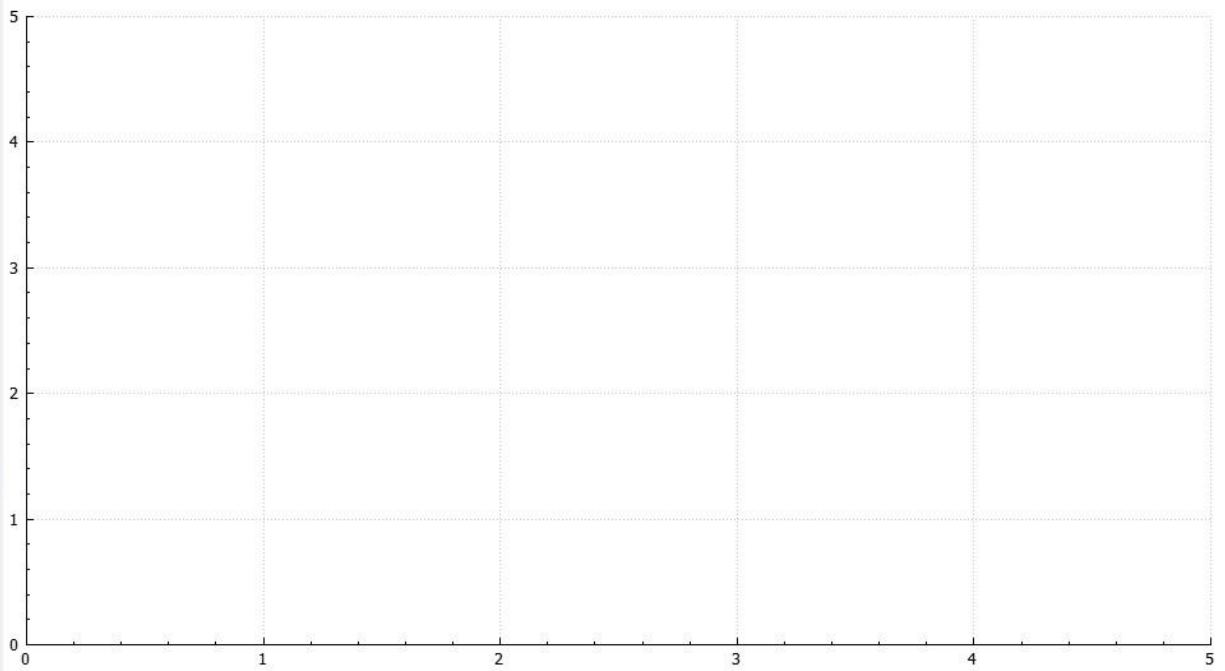|			Min value of x	Max value of x
Function(x)			0	0
X Axis Label			Min value of y	Max value of y
Y Axis Label			0	0
			Step	
			0.01	

Plot

Status

*Insert the function(x) to be plotted.
*The maximum value of X must be greater than the minimum value of x.
*The maximum value of Y must be greater than the minimum value of Y.

Function Plot

Function(x) | x^3+

X Axis Label |

Y Axis Label |

Min value of x   Max value of x
-1   2

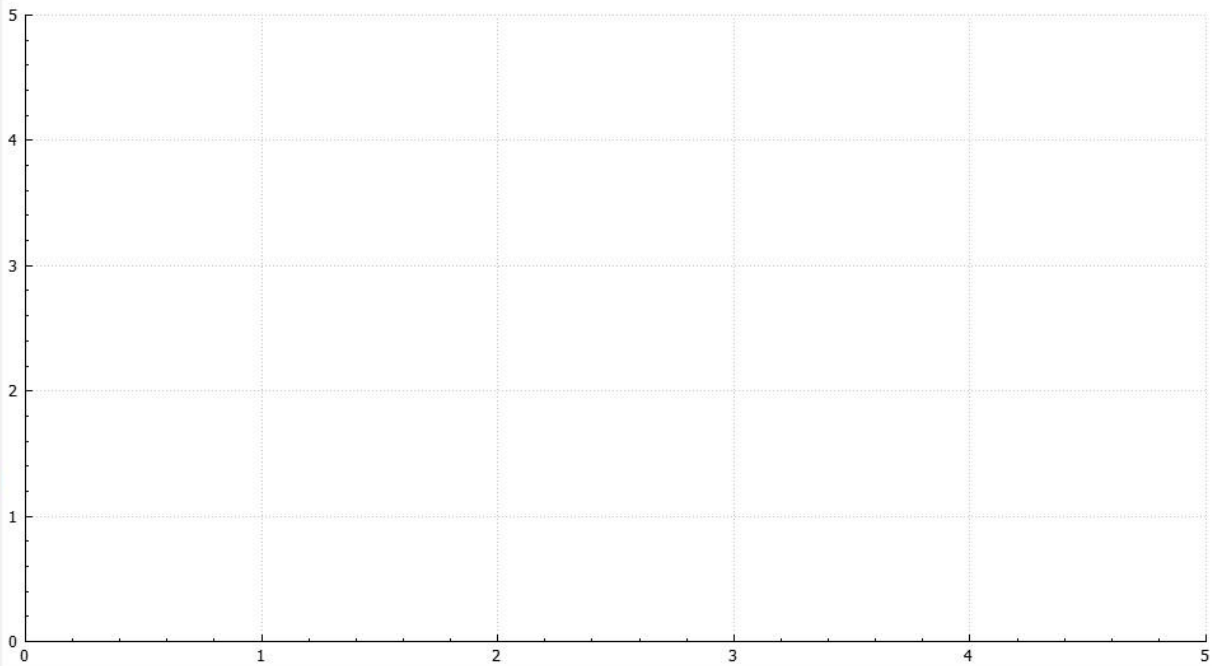Min value of y   Max value of y
-1   2

Step
0.01

Plot

Status

invalid token at 3 (+ can't be the last element in the equation)

MasterMicro

Function Plot

Function(x) `3.1.2*x+5`

X Axis Label ` `

Y Axis Label ` `

Min value of x `-1`

Max value of x `2`

Min value of y `-1`

Max value of y `2`

Step `0.01`

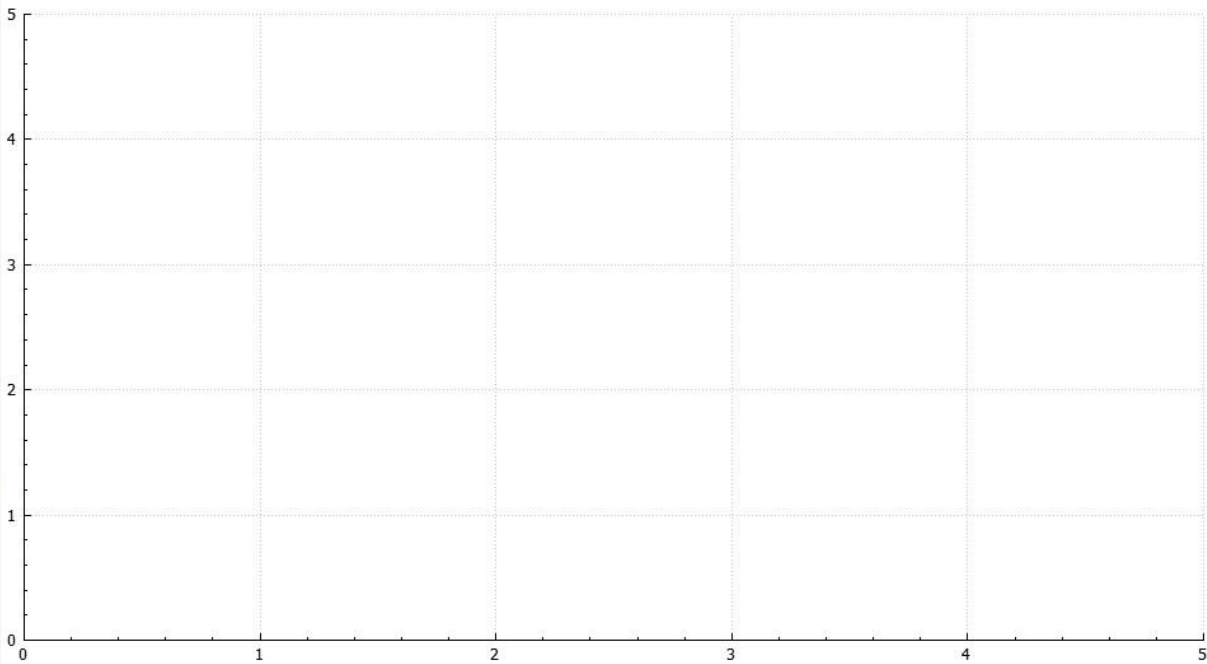**Plot**

Status

un expected token at index 3 ('.' can't be repeated twice in a number, numbers with decimal point must be in this form: (integral part).(fractional part) with only one decimal point

Function(x)   5x+3

X Axis Label   X

Y Axis Label   Y

Min value of x   -1

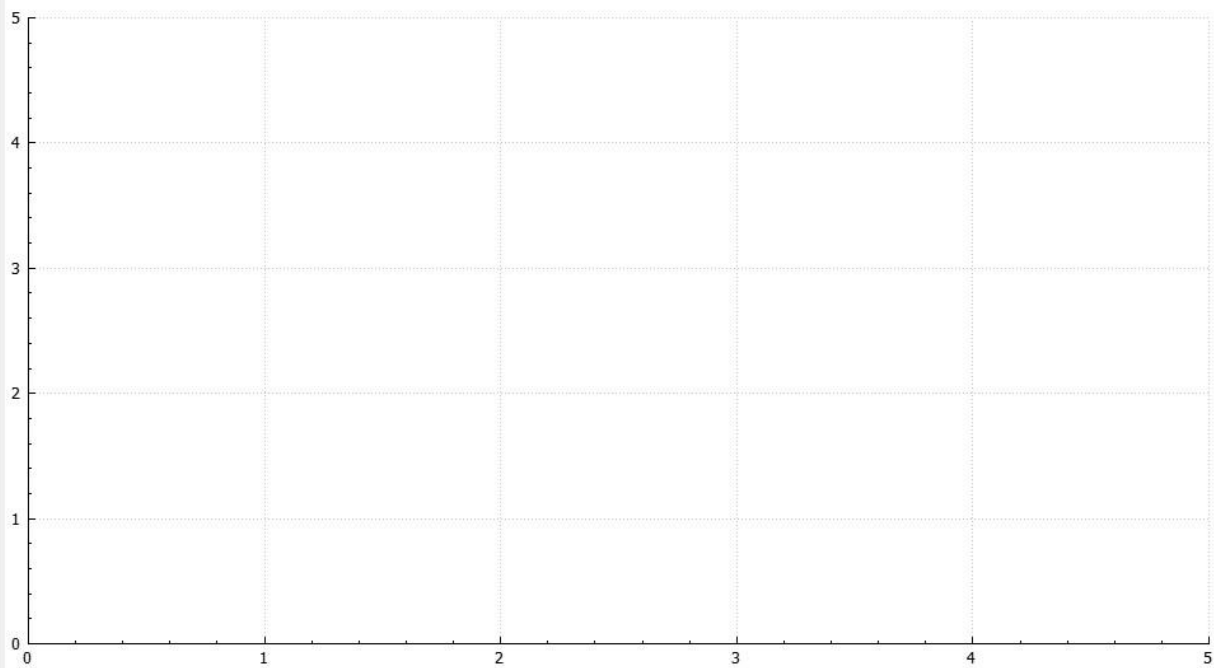Max value of x   2

Min value of y   -1

Max value of y   2

Step   0.01

Plot

Status

un expected token at index 1 ('x' can't follow a number, if you meant to multiplicate this number with x, try to put '*' operator between them).

Function(x)   5*x+3

X Axis Label   X

Y Axis Label   Y

Min value of x   4
Max value of x   2

Min value of y   -1
Max value of y   2

Step   0.01

Plot

Status

*The maximum value of X must be greater than the minimum value of x.