



# Function Plotter

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# 1 Snapshots for invalid inputs

## 1.1 Invalid Function Input

When the user types an invalid function then press on the button, these message will be displayed for 2.5 seconds "Error: Function Expression is invalid" as shown in Figure 0 then the message will return to the previous case.

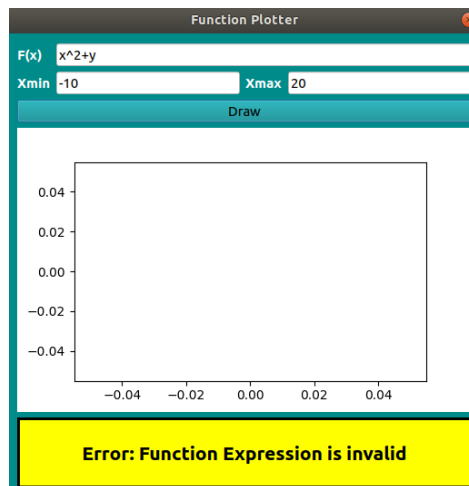


Figure 0: Invalid Function

## 1.2 Invalid X Input

When the user types an invalid x\_min or x\_max then press on the button, these message will be displayed for 2.5 seconds "Error: Xmin & Xmax must be numbers" as shown in Figure 1 then the message will return to the previous case.

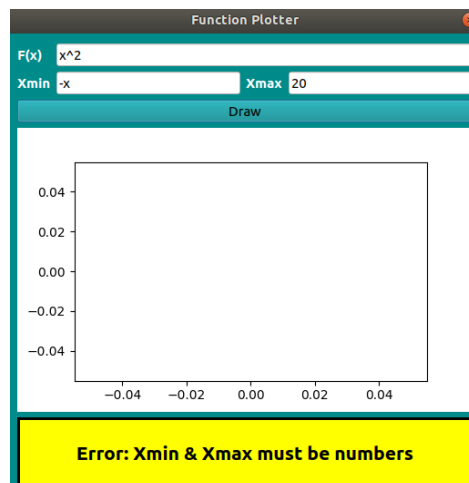


Figure 1: Invalid X

### 1.3 $X_{\min} \geq X_{\max}$

When the user types  $x_{\max}$  not greater than  $x_{\min}$  then press on the button, these message will be displayed for 2.5 seconds "Error:  $X_{\max}$  must be greater than  $X_{\min}$ " as shown in Figure 2 then the message will return to the previous case.

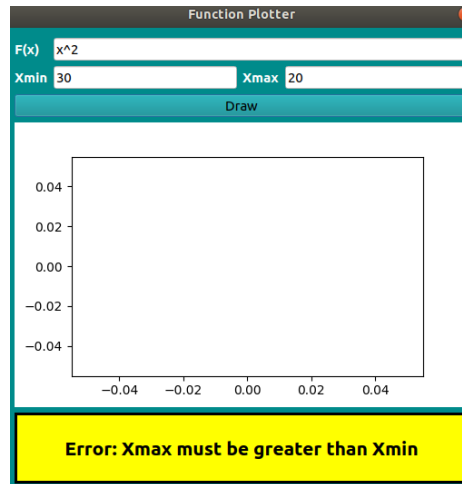


Figure 2:  $X_{\min} > X_{\max}$

## 2 Snapshots for valid inputs

### 2.1 Valid Function Input

When the user types a valid function then press on the button, a message contains the function,  $X_{\min}$  and  $X_{\max}$  will be displayed as shown in Figure 3.

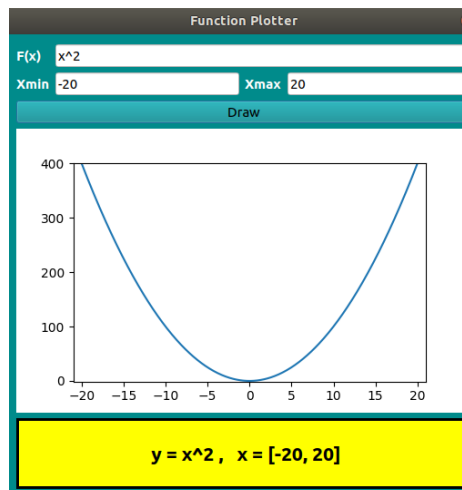


Figure 3: Valid Function

## 2.2 Division by zero

When the user types a function with  $x$  that may lead to division by zero as shown in Figure 4 we have  $1/x$  and the limit for  $x$  is between  $[-100, 100]$ . Although the case  $1/0$  is exist here, the function will work well.

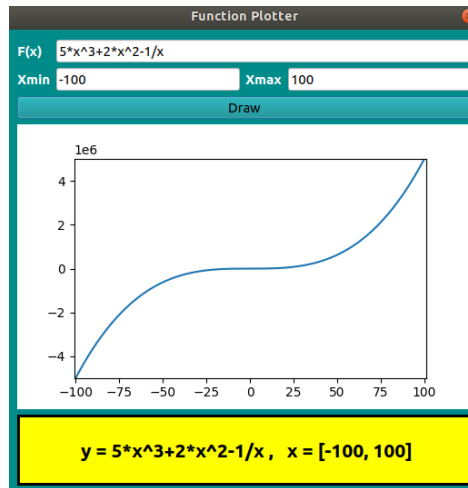


Figure 4: Division by zero

## 2.3 Constant Function

It works with constant functions too as shown in Figure 5.

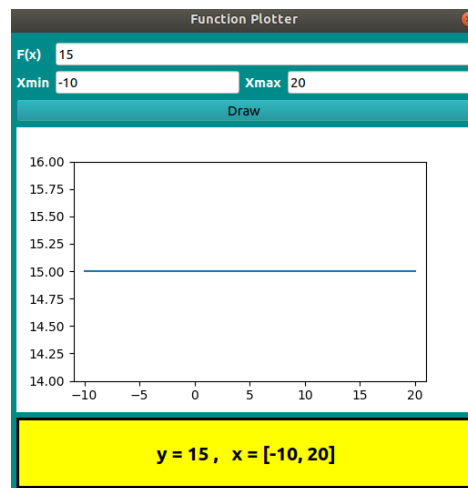


Figure 5: Constant Function