

# Plotting Functions

## Representing, Evaluating, and Graphing Functions

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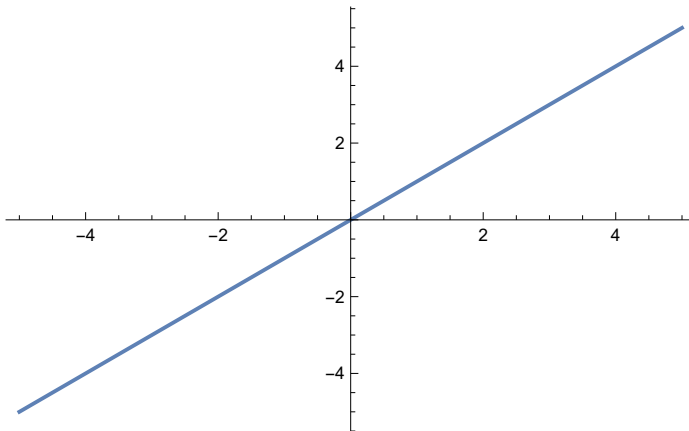
In this section we will be discussing the ability to represent, evaluate, and graph functions using Wolfram Mathematica . In this section we will program rational, and irrational functions .

```
In[ ]:= f[x_] := x
```

In the line above we programmed a linear equation with a slope of one, and a y - intercept of zero . Now we will plot the function from an interval of [-5,5].

```
In[ ]:= Plot[f[x], {x, -5, 5}]
```

Out[ ]:=

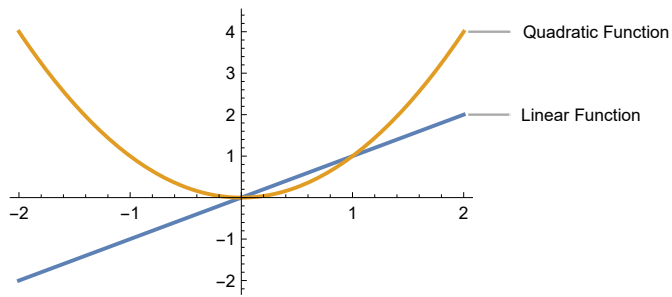


As we can see above there is a linear function continuous on the given domain . Now we will program a quadratic equation using the same interval.

```
In[ ]:= g[x_] := x^2
```

Now we will plot both at the same time using the same graph in a different interval from [-2,2].

```
In[ ]:= Plot[{f[x], g[x]}, {x, -2, 2}, PlotLabels → {"Linear Function", "Quadratic Function"}]
Out[ ]:=
```



Another function that we will plot now is Trigonometric in Radians.

```
In[ ]:= h[x_] := Sin[x]
In[ ]:= Plot[h[x], {x, -2 * Pi, 2 * Pi}, PlotLabels → "Sine Function"]
Out[ ]:=
```

