

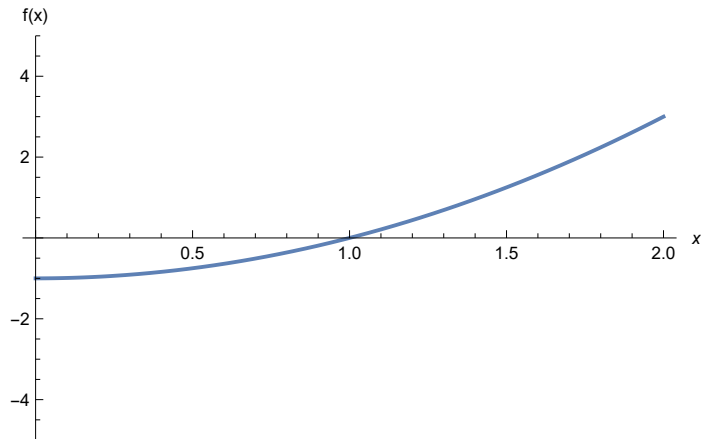
# Forecasting Fallacy

You have to make decisions that are convex.

Give a convex function. Starts with a ceiling.

```
In[ ]:= Plot[-1 + x^2, {x, 0, 2}, PlotRange -> {-5, 5}, AxesLabel -> {x, "f(x)"}]
```

Out[ ]:=



Build a function of a vector.

```
In[ ]:= f[X_] := Mean[1 + X^2]
```

```
In[ ]:= X0 = {1, 1, 1, 1, 1, 1, 1};  
Mean[X0] // N
```

Out[ ]:=

1.

```
In[ ]:= X0 = {0, 0, 0, 0, 0, 0, 5};  
Mean[X0] // N
```

Out[ ]:=

0.714286

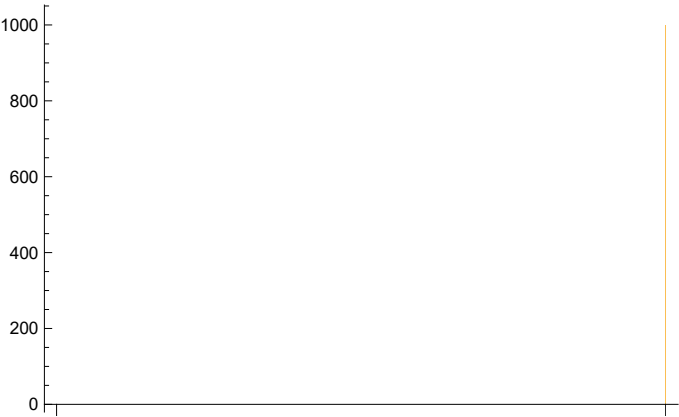
```
In[ ]:= X3 = Join[Table[0, {999}], {1000}] // Flatten;  
Mean[X3] // N
```

Out[ ]:=

1.

`In[ ]:= BarChart[X3]`

`Out[ ]=`



`In[ ]:= f[X3] // N`

`Out[ ]=`

`1001.`