

# Zufälliges

anfängliche Fingerübungen

```
In [1]: 4*6
```

```
Out[1]: 24
```

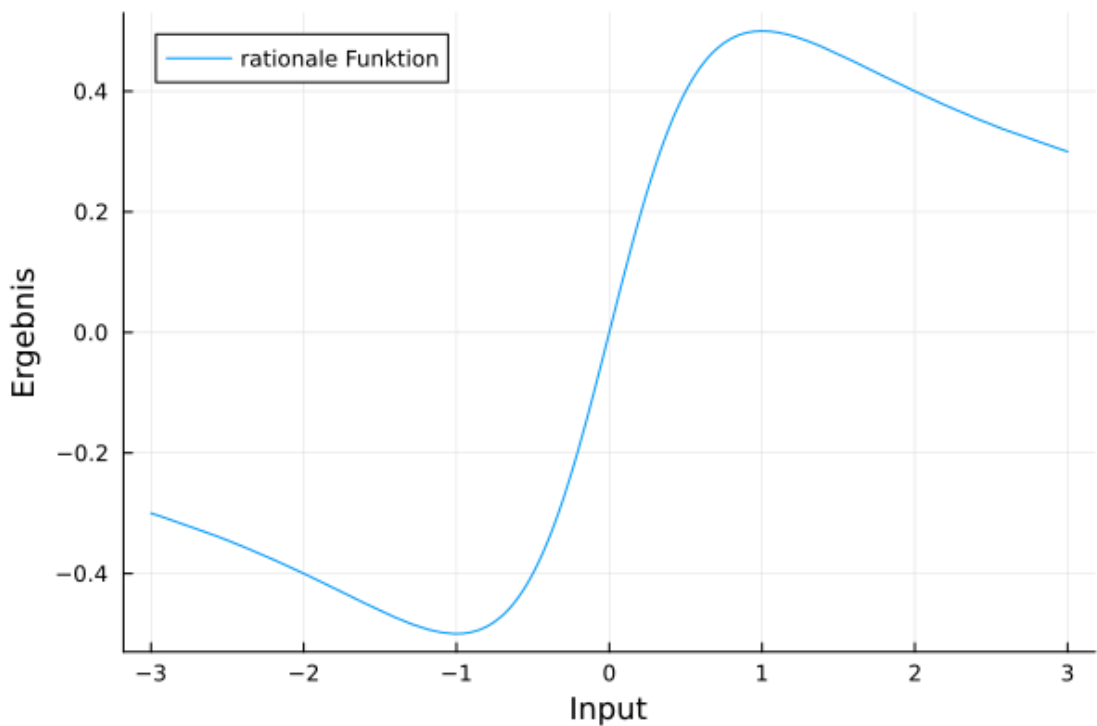
```
In [2]: using Plots
```

```
In [3]: f(x)=x/(1+x^2)
```

```
Out[3]: f (generic function with 1 method)
```

```
In [4]: plot(f,-3,3,fmt=:png,label="rationale Funktion",xlabel="Input",  
           ylabel="Ergebnis")
```

```
Out[4]:
```



```
In [5]: rand(3,3)
```

```
Out[5]: 3x3 Matrix{Float64}:  
  0.951301  0.0029108  0.877782  
  0.661287  0.0883877  0.686778  
  0.71806  0.472352  0.241093
```

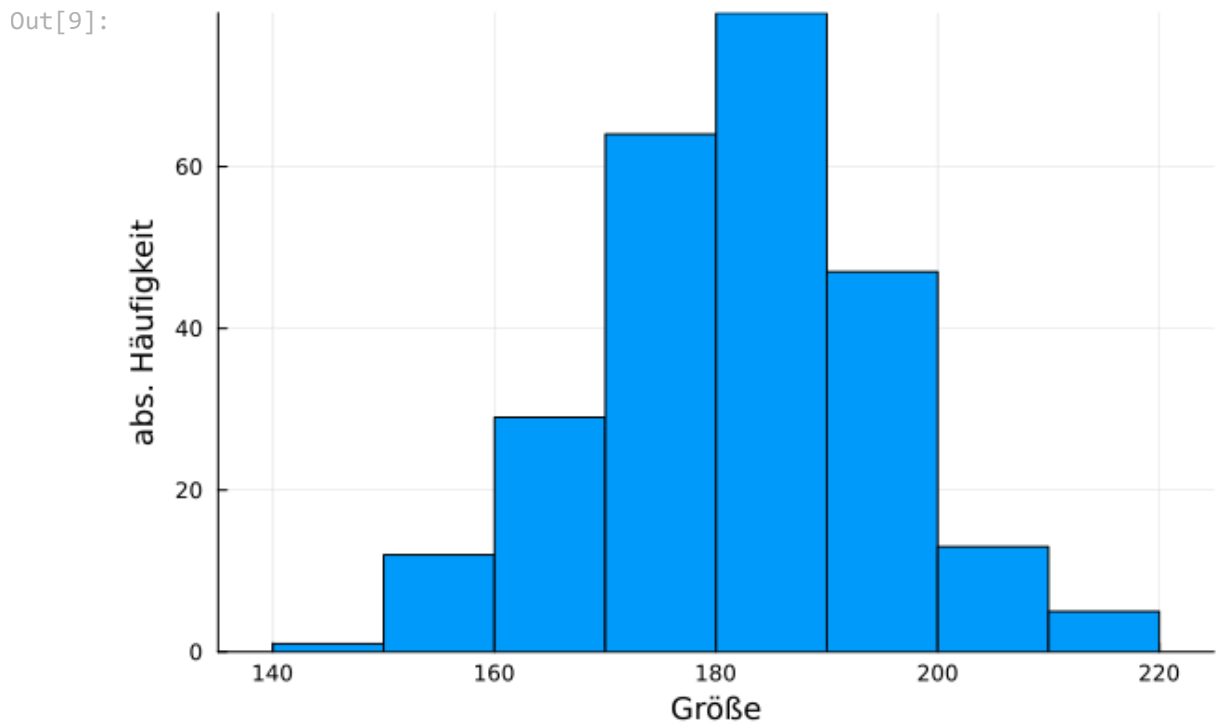
```
In [6]: using Distributions
```

```
In [7]: N=Normal(180,12)
```

```
Out[7]: Normal{Float64}(μ=180.0, σ=12.0)
```

```
In [8]: randsample=rand(N,250);
```

```
In [9]: histogram(randsample,bins=11,legend=false,xlabel="Größe",ylabel="abs. Häufigkeit")
```



```
In [10]: cdf(N,190)
```

```
Out[10]: 0.797671619036357
```

```
In [11]: quantile(N,0.9)
```

```
Out[11]: 195.3786187865352
```

## Irrfahrt

```
In [12]: U=Uniform(0,2*pi)
```

```
Out[12]: Uniform{Float64}(a=0.0, b=6.283185307179586)
```

```
In [13]: m=1000
```

```
Out[13]: 1000
```

```
In [14]: angsample=rand(U,m);
```

```
In [15]: N=Uniform()
```

```
Out[15]: Uniform{Float64}(a=0.0, b=1.0)
```

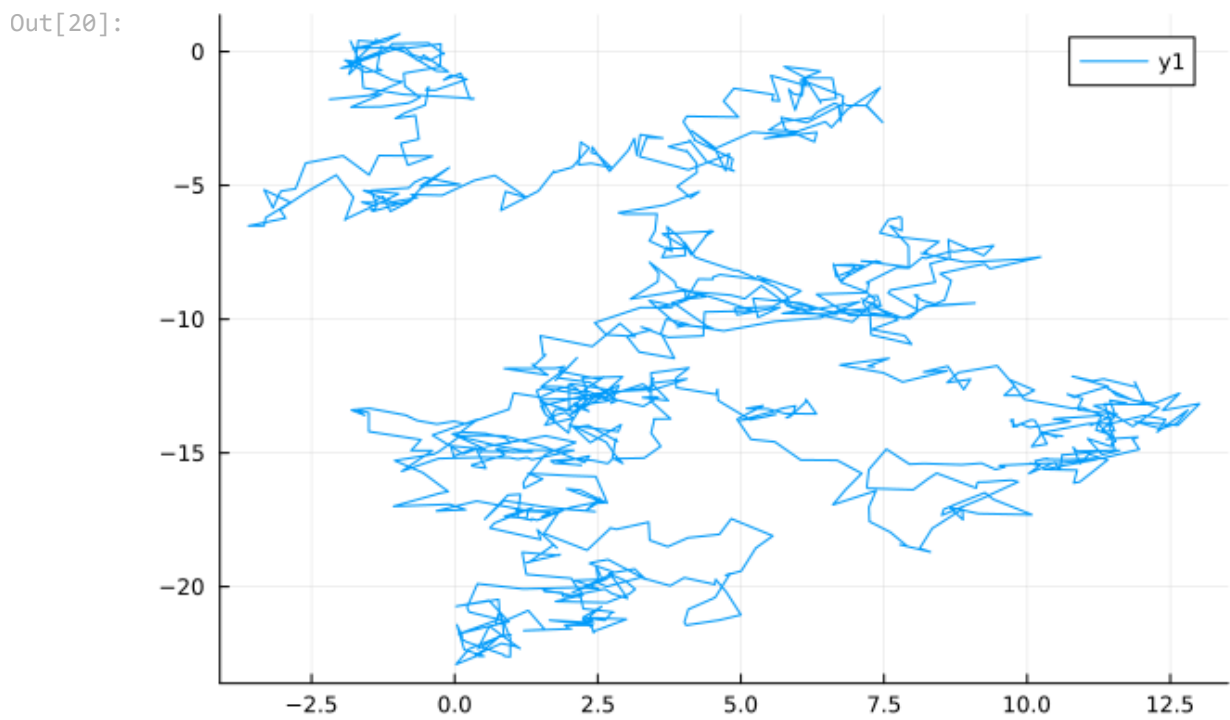
```
In [16]: lensample=rand(N,m);
```

```
In [17]: dx=cos.(angsample).*lensample;
```

```
In [18]: dy=sin.(angsample).*lensample;
```

```
In [19]: x=cumsum(dx); y=cumsum(dy);
```

```
In [20]: plot(x,y)
```



```
In [ ]:
```