

# Normalverteilte Zufallsvariablen

---

Dokumentnummer: DX1163

## 1 Daten generieren

(%i72) load(distrib)\$

(%i73) load(descriptive)\$

(%i74) groesse:random\_normal(175,5,222)\$

(%i75) groesse:map(floor,groesse+0.5);

```
(%o75) [169,182,181,192,180,172,173,174,173,175,174,183,172,
174,169,178,175,170,179,181,181,187,176,168,180,177,183,181
,179,179,174,176,172,171,170,185,184,174,174,180,183,161,
171,172,175,171,180,180,175,178,170,167,177,169,172,165,170
,170,187,174,172,176,177,170,173,182,176,177,169,169,177,
172,170,178,181,187,171,167,175,173,169,180,175,170,180,175
,166,178,185,173,178,175,169,171,173,178,168,172,173,170,
167,169,170,173,176,182,173,175,177,169,181,176,172,168,183
,168,177,177,175,166,179,174,170,178,169,172,171,177,174,
174,177,184,173,168,185,177,182,169,176,163,173,175,171,170
,180,179,181,165,174,171,171,171,171,176,180,178,172,180,
167,168,180,183,180,169,177,169,178,174,178,180,175,179,177
,173,175,174,178,173,166,183,164,166,173,172,177,182,163,
178,176,173,173,173,175,179,174,175,171,177,182,169,185,165
,174,184,171,175,175,182,171,174,167,177,165,171,173,178,
166,187,176,165,167,177]
```

## 2 Daten gruppieren

(%i76) gruppierung:discrete\_freq(groesse);

```
(%o76) [[161,163,164,165,166,167,168,169,170,171,172,173,174,  
175,176,177,178,179,180,181,182,183,184,185,187,192],[1,2,1,  
5,5,6,6,14,12,15,12,18,16,17,10,17,13,7,13,7,7,6,3,4,4,1]]
```

(%i77) x:gruppierung[1];

```
(%o77) [161,163,164,165,166,167,168,169,170,171,172,173,174,  
175,176,177,178,179,180,181,182,183,184,185,187,192]
```

(%i78) h:gruppierung[2];

```
(%o78) [1,2,1,5,5,6,6,14,12,15,12,18,16,17,10,17,13,7,13,7,7,  
6,3,4,4,1]
```

## 3 Daten darstellen

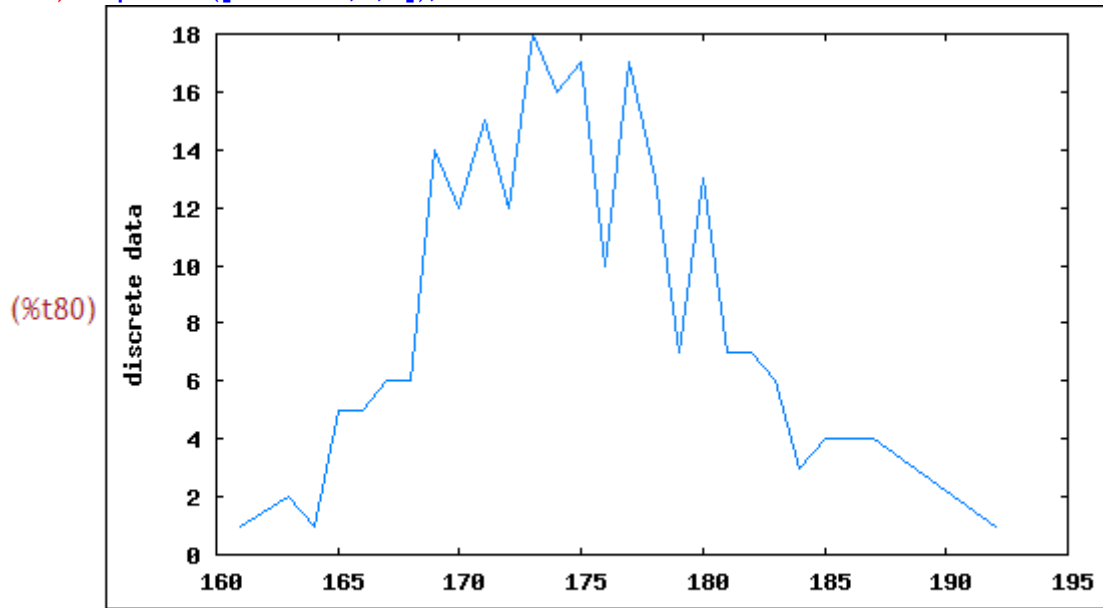
```
(%i79) Groessen: matrix(  
["Körpergröße","Häufigkeit"],  
[transpose(x),transpose(h)]  
);
```

```
(%o79) [ Körpergröße Häufigkeit  
[ 161 1  
163 2  
164 1  
165 5  
166 5  
167 6  
168 6  
169 14  
170 12  
171 15  
172 12  
173 18  
174 16  
175 17  
176 10  
177 17  
178 13  
179 7  
180 13  
181 7  
182 7  
183 6  
184 3  
185 4  
187 4  
192 1 ] ]
```

# Normalverteilte Körpergrößen

---

(%i80) wxplot2d([discrete,x,h]);



---

Created with [wxMaxima](#).