```
> restart;
> Pi = evalf(Pi);
  ImaginaereEinheit = sqrt(-1);
```

$$\pi = 3.141592654$$

$$ImaginaereEinheit = I \tag{1}$$

Kartesische Koordinaten, Polarkoordinaten

```
> r := sqrt(2);
  theta := - Pi/4;
  z := r · cos(theta) + I · r · sin(theta);
  convert(z, polar);
```

$$r := \sqrt{2}$$

$$\theta := -\frac{\pi}{4}$$

$$z := 1 - I$$

$$polar\left(\sqrt{2}, -\frac{\pi}{4}\right) \tag{2}$$

Spezielle polynomiale Gleichungen (Einheitswurzeln)

```
> p := x → x^8 - 1;
```

$$p := x \mapsto x^8 - 1 \tag{3}$$

```
> Nullstellen := solve(p(x) = 0);
  Lsg := Nullstellen[7];
  convert(Lsg, polar);
```

$$Nullstellen := 1, -1, I, -I, \frac{\sqrt{2}}{2} + \frac{I\sqrt{2}}{2}, -\frac{\sqrt{2}}{2} - \frac{I\sqrt{2}}{2}, \frac{\sqrt{2}}{2} - \frac{I\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}$$

$$+ \frac{I\sqrt{2}}{2}$$

$$Lsg := \frac{\sqrt{2}}{2} - \frac{I\sqrt{2}}{2}$$

$$polar\left(1, -\frac{\pi}{4}\right) \tag{4}$$

Vgl. Funktionentheorie

```
> evalc(I^I);
```

$$e^{-\frac{\pi}{2}} \tag{5}$$

```
>
```