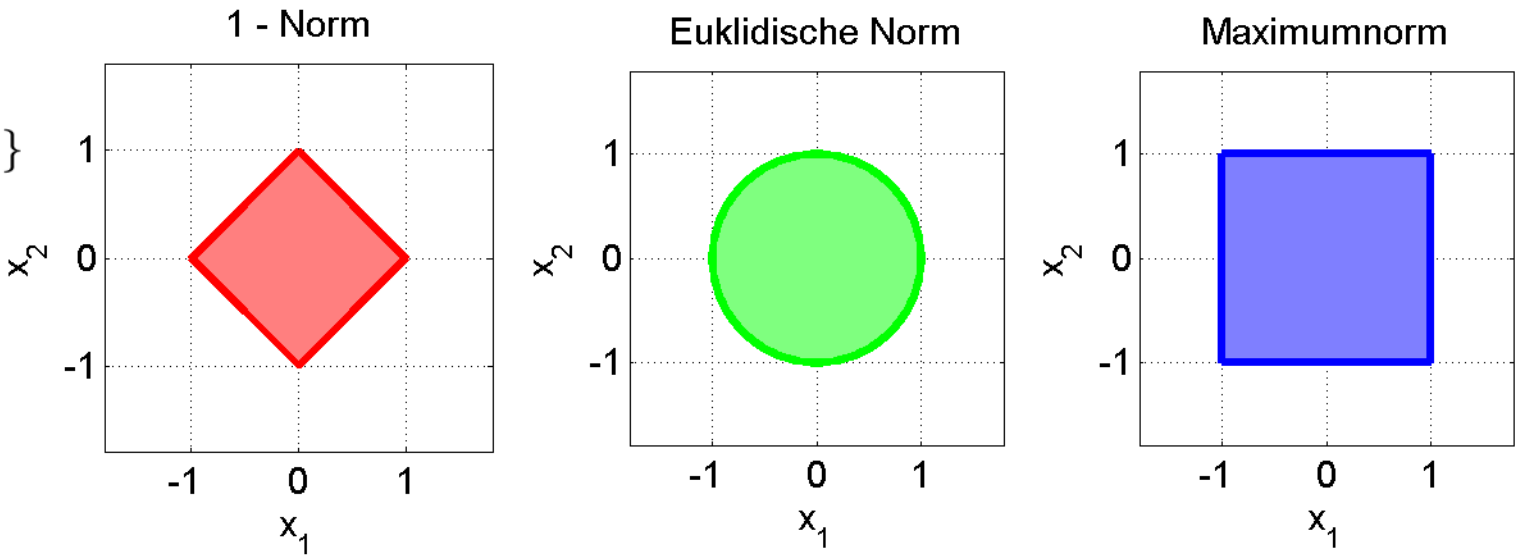
Beispiel 3.9: Vektornormen

$$\|x\|_2 \;:=\; \Big(\sum_{i=1}^{n} x_i^2\Big)^{1/2} \qquad \ldots \quad \text{Euklidische Vektornorm}$$

$$\|x\|_1 \;:=\; \sum_{i=1}^{n} |x_i| \qquad \ldots \quad 1\text{–Norm}$$

$$\|x\|_\infty \;:=\; \max_{i=1,\ldots,n} |x_i| \qquad \ldots \quad \text{Maximumnorm, } \infty\text{–Norm}$$

Kugeln

$\{\, x \,:\, \|x\| \le 1 \,\}$