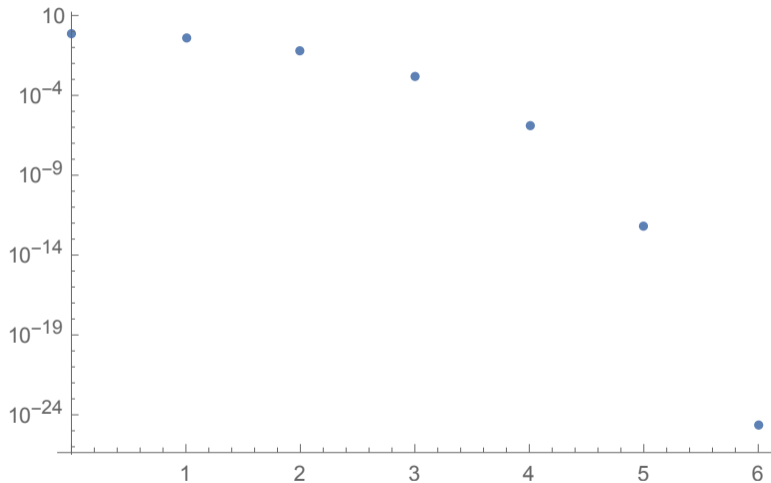


$$f(x) = 0 \text{ d}\mathfrak{a}$$
$$f(x) = \begin{pmatrix} x_1^2 + x_2^2 - 1 \\ x_1^2 - x_2 - 1 \end{pmatrix}$$

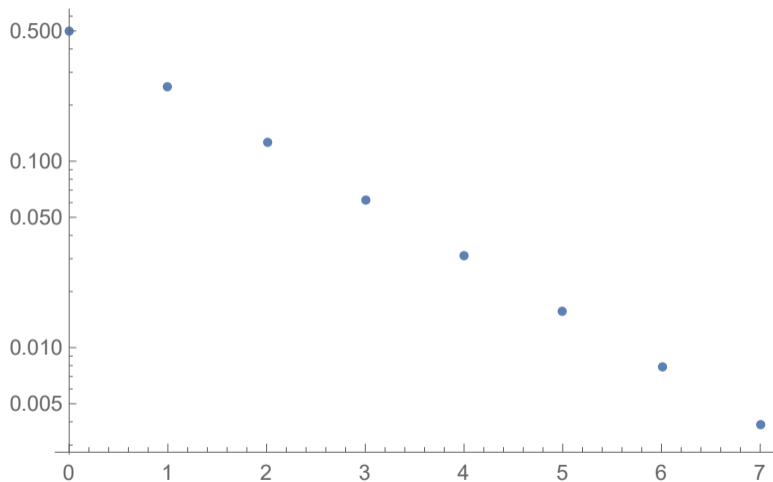


Newton's metod

Startpunkt $x_0 = \begin{pmatrix} 1/2 \\ 1/2 \end{pmatrix}$.

Kvadratisk konvergens
mot den reguljära roten

$$x^* = \begin{pmatrix} 1 \\ 0 \end{pmatrix}.$$



Newton's metod

Startpunkt $x_0 = \begin{pmatrix} 1/2 \\ -1 \end{pmatrix}$.

Linjär konvergens
mot den singulära roten

$$x^* = \begin{pmatrix} 0 \\ -1 \end{pmatrix}.$$