

Speed of convergence of recursions

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Consider a recursion

$$x_{n+1} = f(x_n)$$

where $f(x) = ax + bx^2 + cx^3 + \dots$ (so $0 = f(0)$ is a fixed point)

How can I compute the (asymptotical) speed of convergence to 0?

I'm interested in the particular case of $a=1$.

Can someone give me some reference?

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