

$$\begin{aligned}
x(1) &= \frac{x(0)}{1} = x(0) \\
x(2) &= \frac{x(1)}{2} = \frac{x(0)}{2} \\
x(3) &= \frac{x(2)}{3} = \frac{x(0)}{2 \cdot 3} \\
x(4) &= \frac{x(3)}{4} = \frac{x(0)}{4!} \\
&\vdots \\
x(n) &= \frac{x(n-1)}{n!} = \frac{x(0)}{n!}
\end{aligned}$$