Blowup to $+\infty$ for Sequences

Please note that some browsers require the animation to be clicked first to activate it.

The initial display consists of just the terms of the sequence and the target $+\infty$. Playing $+\infty$ works as usual, and playing the sequence drops more and more of its initial terms—watching what the remaining terms do shows us the convergence or divergence of the sequence.

The $\leftarrow$ and $\rightarrow$ keys can be used to hide or show the graph of the sequence, so as to give the most simplified view (as the animation starts) or show more details (as shown in the figure above). The graph has been drawn in such a way that the parallelism with the notion of $f(+\infty)$ for a real-valued function $f$ is clearly exhibited—our inputs/indices are given on the horizontal axis, and we see the corresponding outputs/terms on the vertical axis.

As in the animation of the arrow relation, pressing lowercase $\text{L}$ reveals one line of the logical definition at a time, with uppercase $\text{L}$ hiding the definition again (to see the “$N$” in the definition, the graph must be in view). Quantifiers are automatically enabled along with the appropriate lines of the definition.

The target $+\infty$ can be toggled between shown and hidden with the $\text{T}$ key.