

On partial limits of sequences

Limit of sequences is a basic concept in mathematical analysis. In this talk we study it in more details using another basic concept of analysis, measure on sets of positive integers. The key role in our considerations plays the concept of a degree of convergence of a given sequence to a given point with respect to a particular measure on the set of positive integers, as a number in interval $[0, 1]$. We study its properties depending on properties of the chosen measure. It appears that standard limits and their known generalizations (convergence with respect to a filter or ideal) are extremal special cases in our approach.