



**Definition**

The sequences  $\mathbf{R}^{\mathbf{N}}$  form a vector space over the field  $\mathbf{R}$  under the usual pointwise addition and scalar multiplication.

**Notation**

Some authors use the notation  $\mathbf{R}^{\infty}$  for  $\mathbf{R}^{\mathbf{N}}$ , meant to indicate that these *infinite* sequences.



