

### Definition of the Limit of a Sequence

Let  $L$  be a real number. The **limit** of a sequence  $\{a_n\}$  is  $L$ , written as

$$\lim_{n \rightarrow \infty} a_n = L$$

If the limit  $L$  of a sequence exists, then the sequence **converges** to  $L$ . If the limit of a sequence does not exist, then the sequence **diverges**.