

1. (5 points) What two sequences are involved in analyzing the series  $\sum_{k=1}^{\infty} a_k$ ?

1. the sequence of terms  $\{a_k\}_{k=1}^{\infty}$

2. the sequence of partial sums  $\{s_n\}_{n=1}^{\infty}$   
where  $s_n = \sum_{k=1}^n a_k$ .

2. (5 points) Using words, and terminology and ideas about sequences, what has to happen in order for us to be able to say the series  $\sum_{k=1}^{\infty} a_k$  converges?

The series  $\sum_{k=1}^{\infty} a_k$  converges when the corresponding sequence of partial sums converges.