1. Let \( a_i = \frac{2i}{3i+1} \)

(a) Does the sequence \( \{a_i\} \) converge or diverge? If it converges, find its limit.

(b) Find the first two partial sums of the series \( \sum_{i=1}^{\infty} a_i \).
(c) Does the series \( \sum_{i=1}^{\infty} a_i \) converge or diverge? If it converges, find its sum.

2. Determine whether the series is convergent or divergent. If it is convergent, find its sum.

\[ \sum_{n=1}^{\infty} \frac{1 + 2^n}{3^n} \]