

## 10.2: Sequences

**Learning Objectives.** Upon successful completion of Section 10.2, you will be able to...

- Answer conceptual questions involving sequences.
- Find whether sequences are monotonic or whether they oscillate and give the limit if the sequence converges.
- Use properties and theorems to determine limits of sequences.
  - Note 1: It is useful to review L'Hôpital's Rule (Section 4.7).
  - Note 2: The fact that  $\lim_{x \rightarrow \infty} \left(1 + \frac{a}{x}\right)^x = e^a$  may be used without proof.
- Use the growth rate of sequences to determine limits of sequences that converge.

**Title**