

6.2.3

1. For $c \in (0, 1)$

$$\begin{aligned}\lim g_n &= \lim \frac{c}{1 + c^n} \\ &= \frac{\lim c}{\lim (1 + c^n)} \\ &= \frac{\lim c}{\lim 1 + \lim c^n} \\ &= c\end{aligned}$$

Since $0 < c < 1$, $\lim c^n = 0$, leaving only 1 in the denominator

6.2.6 6.3.2 6.4.3 6.5.2 6.5.4