

Answer – Push Analysis (contd.)

Using: $\beta = \frac{b}{n}$

Substituting, at time $t=c\log(n)$

$$\begin{aligned}y &= \frac{n+1}{1 + ne^{-\frac{b}{n}(n+1)c\log(n)}} \approx \frac{n+1}{1 + \frac{1}{n^{cb-1}}} \\ &\approx (n+1)\left(1 - \frac{1}{n^{cb-1}}\right) \\ &\approx (n+1) - \frac{1}{n^{cb-2}}\end{aligned}$$