$$(1+\varphi)\cdot \varepsilon_c = \varepsilon_s \qquad (*) \qquad \frac{E_c}{1+\varphi}$$

(*) two ways of looking at the same problem

$$(1+\varphi)\frac{N_c}{E_c \cdot A_c} = \frac{N_s}{E_s A_s}, \qquad \underbrace{N_s + N_c = N}$$

$$\underbrace{\frac{E_s A_s}{E_c A_c}}_{=K}(1+\varphi) N_c = N_s = N - N_c$$

$$(1 + K(1+\varphi))N_c = N \Rightarrow N_c = \frac{1}{1+K(1+\varphi)}\cdot N$$

$K = 1.25$

for $t=0$: $\varphi = 0$ $\quad N_c = 0.44\cdot N$, $N_s = 0.56\, N$

$t \to \infty$: $\varphi = 2$ $\quad N_c = 0.21\, N$, $N_s = 0.79\, N$