

The PDE is

$$W(q, m, n) = -qW_q + nW_m + (K - n)W_n + \max(0, C[A - W(q, m, n)] - D)$$

Simplified, but I don't think it affects the answer. Just removed some multiplicative constants. Can be simplified further if it's easier to think about,

$$W(q, m, n) = -qW_q + nW_m + (K - n)W_n + C[A - W(q, m, n)] - D$$

I think I have the boundary conditions

$$W_q(0, m, n) = 0$$

$$W_m(q, \bar{m}, n) = 0$$

but I don't think I have an analogous one for $W_n(q, m, n^*)$