Due Date: March 8

To complete this exercise, please begin by reading “Nonstationarity in Job Search Theory” by van den Berg.

1. Assume a continuous time setting in which $\rho = .05$ and $\lambda = .3$. Jobs, once accepted, last forever (i.e., $\eta = 0$). Let the wage offer distribution be negative exponential with parameter .2, so that

$$f(w) = .2 \exp(-.2w)$$
$$F(w) = 1 - \exp(-.2w).$$

Assume that unemployment benefits are received for a maximum of 9 months (the time unit throughout is the month). In the first 9 months of an employment spell $b = 3$, while after 9 months of search $b$ drops to 1.

1. Find the optimal reservation wage rate for individuals who have been searching for 9 or more months.
2. Find the reservation wage, as a function of unemployed duration $t$, for those for whom $t < 9$ (use a backwards recursion technique).

2. Compute the hazard rate out of unemployment as a function of search duration.

3. Compute the average accepted wage as a function of $t$. 
