A SAMPLE CODE FOR COMPUTING Q

General form of the transition function is:
$$Q((a,s), A_0 \times S_0) = \sum_{(a',s') \in A_0 \times S_0} \chi_{\{a'=g_q(a,s)\}} \Pi(s'|s)$$

Now, suppose we want to answer the question:
"What is the probability that an employed person (in state e) with assets worth one years income (in state a = 1) is in the third wealth quintile next year?"
Assume that $[\underline{b}, \overline{b}]$ is the interval that determines the third wealth quintile. Then, our goal is to find:
$Q((1,e), [\underline{b}-1, \overline{b}-1] \times \{e\} \cup [\underline{b}-0.5, \overline{b}-0.5] \times \{u\})$. The code Qsample.m computes the transition probability Q for the question above.

Your goal is to apply T^* operator. After creating the initial probability measure, μ_0, you can get μ_1 by:
$$(T^*\mu_0)(a', s') = \sum_{a \in A, s \in S} \chi_{\{a'=g_q(a,s)\}} \Pi(s'|s) \mu_0(a,s)$$
or
$$(T^*\mu_0)(a', s') = \sum_{a \in A, s \in S} Q((a,s), (a',s')) \mu_0(a,s).$$