Pstat 172B: Quiz 1 NAME:_____ *April 15, 2008*

Consider a fully continuous 20-year deferred life annuity of \$1 issued to (35) with premiums payable continuously for 20 years. Assume that mortality follows de Moivre's law with $\omega = 75$ and $i = 0$.

1. (3 pts.) Calculate the benefit premium $\bar{P}({}_{20|}\bar{a}_{35})$ using the equivalence principle.

2. (3 pts.) Calculate the benefit reserve ${}_{10}\bar{V}({}_{20|}\bar{a}_{35})$ at the end of 10 years using the prospective formula.

3. (4 pts.) Calculate the benefit reserve ${}_{10}\bar{V}({}_{20|}\bar{a}_{35})$ at the end of 10 years using the retrospective formula.