

**MATH 3630 - Actuarial Mathematics I**  
**Fall 2008 - Valdez**  
**Homework No. 2**  
**due Wednesday, 6:50 PM, September 17, 2008**

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Suppose you are given:

$$S_X(x) = 1 - .005x - .00005x^2.$$

1. Construct the  $\ell_x$ ,  $d_x$ ,  $q_x$  and  $p_x$  columns of the corresponding mortality table for ages 0, 1 and 2. Use a radix of 100,000.
2. Using the table above and assuming a Uniform Distribution of Death (UDD) over each year of age interval, calculate the following:
  - (a)  $d_{1.4}$
  - (b)  ${}_{0.25}q_1$
  - (c)  ${}_{1.5}p_0$
  - (d)  $\mu_{1.35}$