

MATH 3630 - Actuarial Mathematics I

Fall 2017 - Valdez

Quiz No. 7

Wednesday, 29 November 2017

Name: EMIL Student ID: Suggested Solution

For a fully discrete whole life insurance policy on (x) , you are given:

- The death benefit is 100.
- The net annual premium is 3.2.
- $A_x = 0.35$
- $d = 0.05$

Calculate the expected loss at issue for this single policy.

$$\ddot{a}_x = \frac{1 - A_x}{d} = \frac{1 - 0.35}{0.05} = 13$$

$$E[L_0] = 100 A_x - P \ddot{a}_x$$

$$= 100 (0.35) - 3.2 (13)$$

$$= \underline{\underline{-6.6}} \quad \text{gain to insurer}$$