

Name: _____ Quiz Score: _____/20

Quiz 4: Thursday, February 26, 2015

1. An insurer issues a ten-year term insurance policy with sum insured \$50,000 to a life aged 47. Level annual premiums are payable throughout the term of the policy. The death benefit is payable at the end of the year of death.
 - (a) Write down the equation you would solve, using the equivalence principle, to find the annual premium, P . (*Use standard actuarial notation. No need to solve it for P . You may use π for the premium if you prefer.*)
 - (b) Find an expression for the future loss random variable, L_7 . (*HINT: There will be several cases.*)
 - (c) Find $E[L_7]$ if $P = 700$, $i = 0.06$, and $q_x = 0.01$, for all x .
 - (d) Find $V[L_7]$ under the same conditions.