

Name: _____ Quiz Score: _____/20

Quiz 2: Thursday, January 29, 2015

1. An insurer issues a 30-year annual premium endowment insurance policy with sum insured \$100,000 to a select life aged 51. The insurer incurs initial expenses of \$500 and renewal expenses of 2% of each premium, including the first. The death benefit is payable immediately upon death.

(a) Write down a formula for L_0^g , the gross future loss random variable. (*Simplify if possible.*)

(b) Find an expression for the annual premium, P , using the equivalence premium principle. (*Write it in terms of actuarial symbols; you don't have enough information to find a numerical answer.*)