Name:

For a whole life annuity immediate of 100 per year on (67), you are given:

• Mortality follows the Survival Ultimate Life Table.
• i=0.05
• Y is the present value random variable for this annuity.

Calculate the probability that Y will exceed 1200.

For a whole life annuity-due on (40), you are given:

• Before age 65, mortality follows a constant force $\mu = 0.004$.
• For age 65 and beyond, mortality follows the Survival Ultimate Life Table.

• Interest rate i = 0.10 for the next 25 years and i = 0.05 thereafter.

Calculate $\ddot{a}_{40}$.

You are given:

• For a fixed age x, $_kp_x = (0.92)^k$ for $k \geq 0$.

• i=0.05

• Y is the present value random variable for a 3-year temporary life annuity-immediate of 1 per year on (x).

Calculate Var [Y].

Good look☺