

300. For a fully discrete 20-year term life insurance on (40), you are given:

- (i) The death benefit is 10,000.
- (ii) The death benefit is payable at the end of the year of death.
- (iii) Values in year 4:

	Anticipated	Actual
Gross annual premium	90	90
Expenses as a percent of premium	0.030	0.025
q_{43}	0.003	0.002
Annual effective rate of interest	0.05	0.04

- (iv) Expected value of the present value of future losses random variable based on assumed values in years 3 and later.

End of year	Expected Value
3	100
4	125

A company issued the 20-year term life insurance to 1000 lives age 40 with independent future lifetimes.

At the end of the 3rd year 990 insurances remain in force.

Calculate the total gain from mortality, interest and expenses in year 4 from the 990 insurances.

- (A) 8,345
- (B) 8,385
- (C) 8,425
- (D) 8,465
- (E) 8,505