

**247.** For a fully discrete 2-payment, 3-year term insurance of 10,000 on  $(x)$ , you are given:

(i)  $i = 0.05$

(ii)  $q_x = 0.10$

$q_{x+1} = 0.15$

$q_{x+2} = 0.20$

(iii) Death is the only decrement.

(iv) Expenses, paid at the beginning of the year, are:

Policy Year	Per policy	Per 1000 of insurance	Fraction of premium
1	25	4.50	0.20
2	10	1.50	0.10
3	10	1.50	—

(v) Settlement expenses, paid at the end of the year of death, are 20 per policy plus 1 per 1000 of insurance.

(vi)  $G$  is the gross annual premium for this insurance.

(vii) The single benefit premium for this insurance is 3499.

Calculate  $G$ , using the equivalence principle.

(A) 1597

(B) 2296

(C) 2303

(D) 2343

(E) 2575