

240. For a 10-payment 20-year endowment insurance of 1000 on (40), you are given:

(i) The following expenses:

	First Year		Subsequent Years	
	Percent of Premium	Per Policy	Percent of Premium	Per Policy
Taxes	4%	0	4%	0
Sales Commission	25%	0	5%	0
Policy Maintenance	0	10	0	5

- (ii) Expenses are paid at the beginning of each policy year.
- (iii) Death benefits are payable at the moment of death.
- (iv) The premium is determined using the equivalence principle.

Which of the following is a correct expression for the premium?

- (A) $(1000\bar{A}_{40:\overline{20}|} + 10 + 5a_{40:\overline{9}|}) / (0.96\ddot{a}_{40:\overline{10}|} - 0.25 - 0.05\ddot{a}_{40:\overline{9}|})$
- (B) $(1000\bar{A}_{40:\overline{20}|} + 10 + 5a_{40:\overline{9}|}) / (0.91\ddot{a}_{40:\overline{10}|} - 0.2)$
- (C) $(1000\bar{A}_{40:\overline{20}|} + 10 + 5a_{40:\overline{19}|}) / (0.96\ddot{a}_{40:\overline{10}|} - 0.25 - 0.05\ddot{a}_{40:\overline{9}|})$
- (D) $(1000\bar{A}_{40:\overline{20}|} + 10 + 5a_{40:\overline{19}|}) / (0.91\ddot{a}_{40:\overline{10}|} - 0.2)$
- (E) $(1000\bar{A}_{40:\overline{20}|} + 10 + 5a_{40:\overline{9}|}) / (0.95\ddot{a}_{40:\overline{10}|} - 0.2 - 0.04\ddot{a}_{40:\overline{20}|})$