

292. For a fully discrete 3-year term life insurance policy on (40) you are given:

- (i) All cash flows are annual.
- (ii) The annual gross premium is 1000.
- (iii) Profits and premiums are discounted at an annual effective rate of 0.12.
- (iv) The expected profit at the end of each year given that the insurance is in force at the beginning of the year:

Time in years	Profit
0	-400
1	150
2	274
3	395

- (v) The expected profit at the end of each year given that the insurance is in force at age 40:

Time in years	Profit
0	-400
1	150
2	245
3	300

Calculate the profit margin.

- (A) 4.9%
- (B) 5.3%
- (C) 5.9%
- (D) 6.6%
- (E) 9.7%