

230. For a special fully discrete 20-year endowment insurance on (40):

- (i) The death benefit is 1000 for the first 10 years and 2000 thereafter. The pure endowment benefit is 2000.
- (ii) The annual benefit premium is 40 for each of the first 10 years and 100 for each year thereafter.
- (iii) $q_{40+k} = 0.001k + 0.001, \quad k = 8, 9, \dots, 13$
- (iv) $i = 0.05$
- (v) $\ddot{a}_{51:\overline{9}|} = 7.1$

Calculate the benefit reserve at the end of year 10.

- (A) 490
- (B) 500
- (C) 530
- (D) 550
- (E) 560