

275. A dental benefit is designed so that a deductible of 100 is applied to annual dental charges. The reimbursement to the insured is 80% of the remaining dental charges subject to an annual maximum reimbursement of 1000.

You are given:

- (i) The annual dental charges for each insured are exponentially distributed with mean 1000.
- (ii) Use the following uniform (0, 1) random numbers and the inversion method to generate four values of annual dental charges:

0.30 0.92 0.70 0.08

Calculate the average annual reimbursement for this simulation.

- (A) 522
- (B) 696
- (C) 757
- (D) 947
- (E) 1042