

**131.** You are simulating the gain/loss from insurance where:

- (i) Claim occurrences follow a Poisson process with  $\lambda = 2/3$  per year.
- (ii) Each claim amount is 1, 2 or 3 with  $p(1) = 0.25$ ,  $p(2) = 0.25$ , and  $p(3) = 0.50$ .
- (iii) Claim occurrences and amounts are independent.
- (iv) The annual premium equals expected annual claims plus 1.8 times the standard deviation of annual claims.
- (v)  $i = 0$

You use 0.25, 0.40, 0.60, and 0.80 from the unit interval and the inversion method to simulate time between claims.

You use 0.30, 0.60, 0.20, and 0.70 from the unit interval and the inversion method to simulate claim size.

Calculate the gain or loss from the insurer's viewpoint during the first 2 years from this simulation.

- (A) loss of 5
- (B) loss of 4
- (C) 0
- (D) gain of 4
- (E) gain of 5