

**132.** Annual dental claims are modeled as a compound Poisson process where the number of claims has mean 2 and the loss amounts have a two-parameter Pareto distribution with  $\theta = 500$  and  $\alpha = 2$ .

An insurance pays 80% of the first 750 of annual losses and 100% of annual losses in excess of 750.

You simulate the number of claims and loss amounts using the inverse transform method with small random numbers corresponding to small numbers of claims or small loss amounts.

The random number to simulate the number of claims is 0.8. The random numbers to simulate loss amounts are 0.60, 0.25, 0.70, 0.10 and 0.80.

Calculate the total simulated insurance claims for one year.

- (A) 294
- (B) 625
- (C) 631
- (D) 646
- (E) 658