

## Question #86

Key: D

The modified severity,  $X^*$ , represents the conditional payment amount given that a payment occurs. Given that a payment is required ( $X > d$ ), the payment must be uniformly distributed between 0 and  $c \cdot (b - d)$ .

The modified frequency,  $N^*$ , represents the number of losses that result in a payment.

The deductible eliminates payments for losses below  $d$ , so only  $1 - F_x(d) = \frac{b - d}{b}$  of losses will require payments. Therefore, the Poisson parameter for the modified frequency distribution is  $\lambda \cdot \frac{b - d}{b}$ . (Reimbursing  $c\%$  after the deductible affects only the payment amount and not the frequency of payments).