

Question #280

Key: D

Let S = aggregate claims, I_5 = claims covered by stop loss

S	I_5
0	0
5	0
x	$x - 5$ (i.e., for any $S > 5$, $I_5 = S - 5$)

$$E[I_5] = E[S] - 5 + 5 \Pr(0 \text{ claims})$$

$$E[S] = 5 \times (0.6 \times 5 + 0.4 \times k) = 15 + 2k$$

$$\Pr(0 \text{ claims}) = e^{-5}$$

$$E[I_5] = 15 + 2k - 5 + 5e^{-5} = 28.03$$

$$10.034 + 2k = 28.03$$

$$2k = 18$$

$$k = 9$$