

Question #84

Key: A

$$B = \begin{cases} c(400 - x) & x < 400 \\ 0 & x \geq 400 \end{cases}$$

$$100 = E(B) = c \cdot 400 - cE(X \wedge 400)$$

$$= c \cdot 400 - c \cdot 300 \left(1 - \frac{300}{300 + 400} \right)$$

$$= c \left(400 - 300 \cdot \frac{4}{7} \right)$$

$$c = \frac{100}{228.6} = 0.44$$