

Question #108

Key: C

$$\begin{aligned} p(k) &= \frac{2}{k} p(k-1) \\ &= \left[0 + \frac{2}{k} \right] p(k-1) \end{aligned}$$

Thus an $(a, b, 0)$ distribution with $a = 0$, $b = 2$.

Thus Poisson with $\lambda = 2$.

$$\begin{aligned} p(4) &= \frac{e^{-2} 2^4}{4!} \\ &= 0.09 \end{aligned}$$