

Question #137

Key: D

$$\begin{aligned}L(p) &= f(0.74)f(0.81)f(0.95) \\ &= (p+1)0.74^p (p+1)0.81^p (p+1)0.95^p \\ &= (p+1)^3 (0.56943)^p\end{aligned}$$

$$l(p) = \ln L(p) = 3\ln(p+1) + p \ln(0.56943)$$

$$l'(p) = \frac{3}{p+1} - 0.563119 = 0$$

$$p+1 = \frac{3}{0.563119} = 5.32747$$

$$p = 4.32747.$$