

Question #267

Answer: D

$$S_0(t) = \exp\left[-\int_0^t (80-x)^{-0.5} dx\right] = \exp\left[2(80-x)^{0.5}\Big|_0^t\right] = \exp\left[2((80-t)^{0.5} - 80^{0.5})\right]$$

$$F = S_0(10.5) = \exp\left[2(69.5^{0.5} - 80^{0.5})\right] = 0.29665$$

$$S_0(10) = 0.31495$$

$$S_0(11) = 0.27935$$

$$G = S_0(10.5)^{\exp} = [0.31495(0.27935)]^{0.5} = 0.29662$$

$$F - G = 0.00003$$