

Question #230

Key: B

$$\mu = E[E(X | \lambda)] = E(\lambda) = 1(0.9) + 10(0.09) + 20(0.01) = 2$$

$$EVPV = v = E[Var(X | \lambda)] = E(\lambda) = 2$$

$$VHM = a = Var[E(X | \lambda)] = Var(\lambda) = 1(0.9) + 100(0.09) + 400(0.01) - 2^2 = 9.9$$

$$Z = \frac{1}{1 + 2/9.9} = 0.83193; \quad 11.983 = 0.83193x + 0.16807(2); \quad x = 14$$