262. You are given:

(i) T_x and T_y are independent.

(ii) The survival function for (x) follows $l_x = 100(95 - x), 0 \le x \le 95$.

(iii) The survival function for (y) is based on a constant force of mortality, $\mu_{y+t} = \mu, t \ge 0$.

(iv) $n < 95 - x$

Determine the probability that (x) dies within n years and also dies before (y).

(A) $\dfrac{e^{-\mu n}}{95 - x}$

(B) $\dfrac{ne^{-\mu n}}{95 - x}$

(C) $\dfrac{1 - e^{-\mu n}}{\mu(95 - x)}$

(D) $\dfrac{1 - e^{-\mu n}}{95 - x}$

(E) $1 - e^{-\mu n} + \dfrac{e^{-\mu n}}{95 - x}$